RECORDS OF THE PAST

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JANUARY-FEBRUARY 1911

THE EXCAVATION OF MEMPHIS

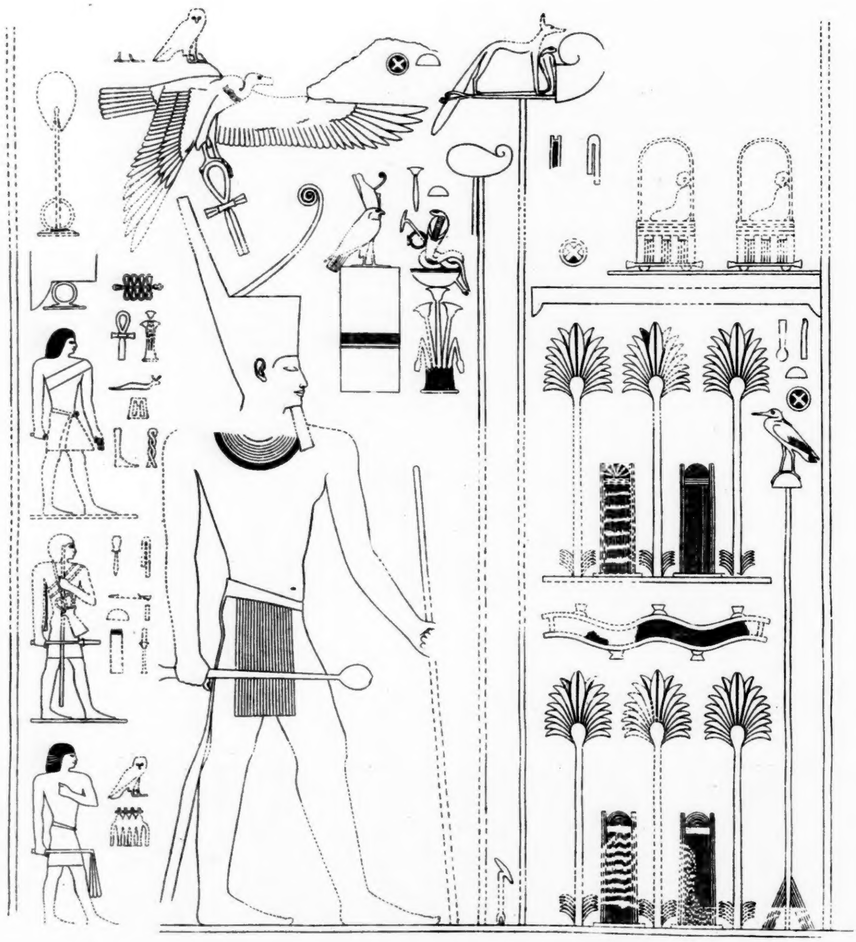
THIS work has been steadily progressing in the care of the excavators of the Egyptian Research Account. The principal sites worked on, since the last account in the RECORDS OF THE PAST, are the royal palace and the Temple of Ptah. At the north end of the ruins stands a large mound, about 60 ft. high and 400 ft. long. This proves to be the Palace mound; and the topmost building of it was the Palace of Apries—Pharaoh Hophra. The plan shows the entrance at the south side, across a wide fosse, marked the New Broadway. The Old Broadway was an entrance of earlier date to the previous palace. The guard-room, with a trench all round it, was the first room opening on the entrance. Beyond that, on the west, was the kitchen in which the brick fireplaces still remain. To the east lies the door to the *harem* quarter; and opposite that, on the west, is the winter court, which measured 116 ft. by 107 ft., and contained 4 rows of 4 columns, supporting the roof nearly 50 ft. high. Seeking for the foundations, we found that we could not reach them even at 45 ft. beneath the floor. Thus the idea of this part of the palace was a structure 100 ft. high, filled up for 50 ft. with earth and cross-walls to carry the columns, and upon that a hall of columns 50 ft. in height. The ruin of this court is still about 12 ft. high. Beyond the winter court were some halls and work-rooms, and then at the northern end stood the summer court, or *mandara*, which had a row of columns to support a verandah along its south side, about 55 ft. high. Only the capitals of these columns are left, but they show by proportion

ABOUT 4 FT. DOWN WATER IS REACHED

BEGINNING THE EXCAVATION OF A FIELD AT MEMPHIS

CANAL TO CARRY OFF THE WATER IN THE EXCAVATIONS

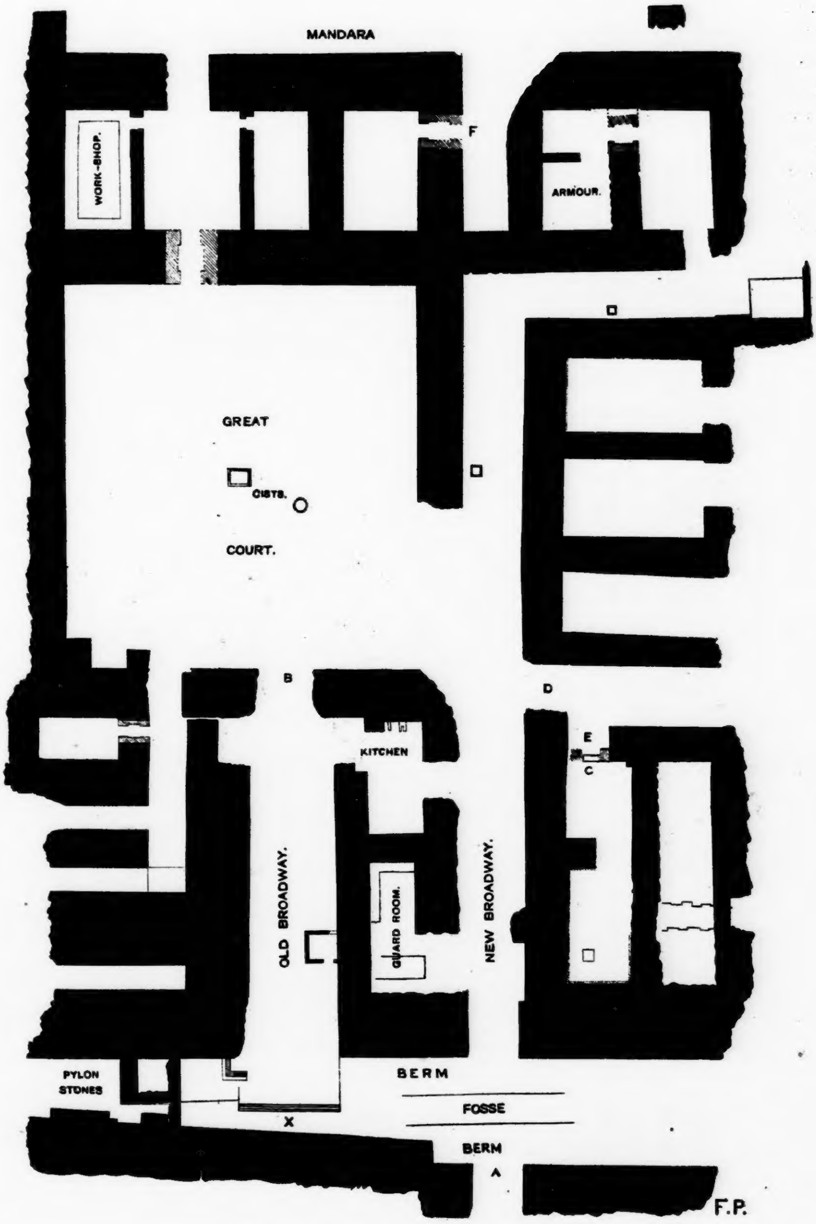
BAILING THE WATER FROM THE PITS INTO THE CANAL



INSTALLATION CEREMONIES OF CROWN PRINCE. HE VISITS THE SACRED LAKE OF HELIOPOLIS

what the scale of the building must have been. The walls are from 14 to 20 ft. thick; and the whole area is about two acres in extent.

This is the first time that the plan of an Egyptian palace has been disclosed, and it is remarkable that its essential parts, the guard-room, kitchen, *harem*, winter court and summer court are all in the same relative positions as these parts in the mansions of the XII dynasty at Kahun, which I planned in 1890. The halls of the *harem* quarter have massive stone floors, two courses thick, and a stone dado round the walls. In the center of the winter court is a stone cist sunk in the floor. It is very accurately cut and has a lid fitting over it. Perhaps it was a safe deposit for the throne when not in use.



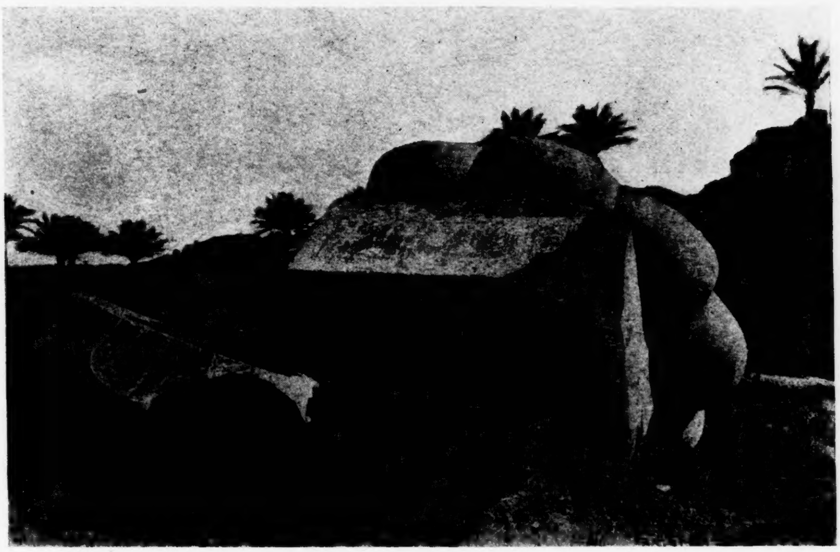
PLAN OF PALACE OF APRIES, MEMPHIS

In the fosse, which separated the palace from its approaches on the south, we found, at the west end, the blocks of a great gateway to one of the earlier palaces, probably of the XII dynasty. When these were put together there were 6 scenes, 3 for each side of the gateway. Each scene is nearly 7 ft. square. The subjects refer to the ceremonies of the installation of the Crown Prince as heir to the kingdom. First, he stands with the high officials behind him, and porters bring up the various objects used in the ceremonies. Second, the palanquins of the royal children come into the scene and the festival of the royal hippopotamus is named. Third, the prince dances while the goddess of heaven, Nut, calls him to come. Fourth, he visits the sacred lake of Heliopolis surrounded with palm trees

SILVER CASTING FROM THE FITTINGS OF THE ROYAL PALANQUIN

beneath which are shrines: this ceremony is described elsewhere as performed by Piankhy the Ethiopian when he took the throne of Egypt. Fifth, the prince wears the woolen scarf and carries a long staff, while the people of the town and the country dance before him. Sixth, he visits some other sanctuaries. These scenes give a more complete view of the ceremonies than we have in any other record.

In the palace, many small objects were found. The most striking was a portion of the fittings of the royal palanquin, which had been stolen and buried by a workman in the workshop. It is a massive casting of silver, weighing about a pound, with a head of the goddess Hat-hor, the face of gold, the hair and collar of gold and bronze. The bronze had gone

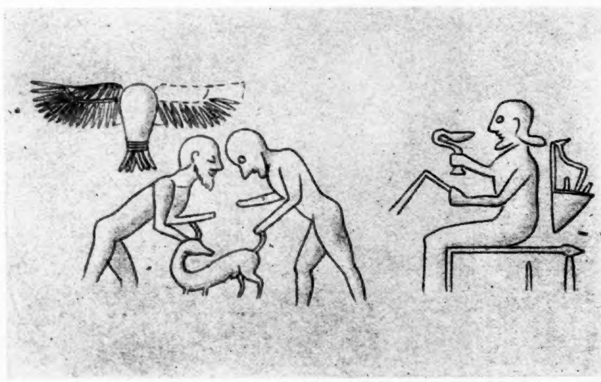


GREAT COURT OF PALACE OF APRIES, LOOKING NORTH

CAPITALS OF 50 FT. COLUMNS IN NORTH COURT

green, amid which the lines of gold gleam out. Some ivory carving was also found, such as the man with offerings. Large quantities of steel scale armor remained from the corslets of the Persians. Herodotus describes their linen corslets covered with scales like fish, and Ammianus says that the Persians were so completely covered with scale armor that they had only 3 holes, for the eyes and mouth. A fine steel sword, with the ornamental steel-work of the scabbard, was also also found here.

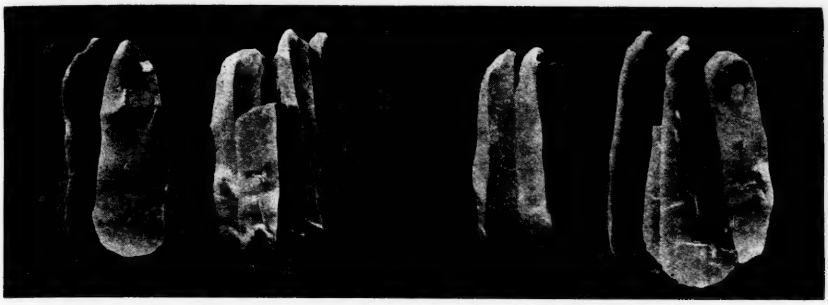
In the fosse of the palace was a layer of seals and labels from parcels, thrown away in the Persian age. The labels are thin slips of wood, inscribed in Aramaic on one side and Demotic on the other. The seals are Egyptian, Persian and Greek, and they give some of the earliest examples of classical gem engraving, as these were of the V century B.C. The most remarkable seal was that of an alliance probably put upon a packet of some state monopoly, such as the realgar from the state mine described by Strabo in Paphlagonia. The subject of these all is that of two men



SEAL OF A KING OF CAPPADOCIA

holding a kid and swearing over it. This is like the oath over the pig on the Samnite coins. One man has the Hittite spread eagle behind him, the other has his king. Behind the king is a bow in a case, a mark of the Euxine region. Probably this is a king of Cappadocia in alliance with the last remnant of the Hittites.

In the temple of Ptah—the metropolitan temple of Egypt—we have at last succeeded in hiring the land and beginning to clear it down to 12 ft. deep, 9 ft. of that being under water. We begin upon a field, cutting into half of it and piling the earth on the other half. Descending about 4 ft. we get into water, which is taken out by pumping day and night, through a canal which runs through the work. Then after clearing to about 5 or 6 ft. down, small pits are sunk for 6 ft. further, baling out water into our canal all the time, each pit to be finished by sunset, and then filled with water, and a fresh pit dug by its side next day. Before leaving a pit the ground is probed with iron rods for 3 ft. deeper, to make sure that no stone lies just below. Thus we search the ground to about 15 ft. deep.

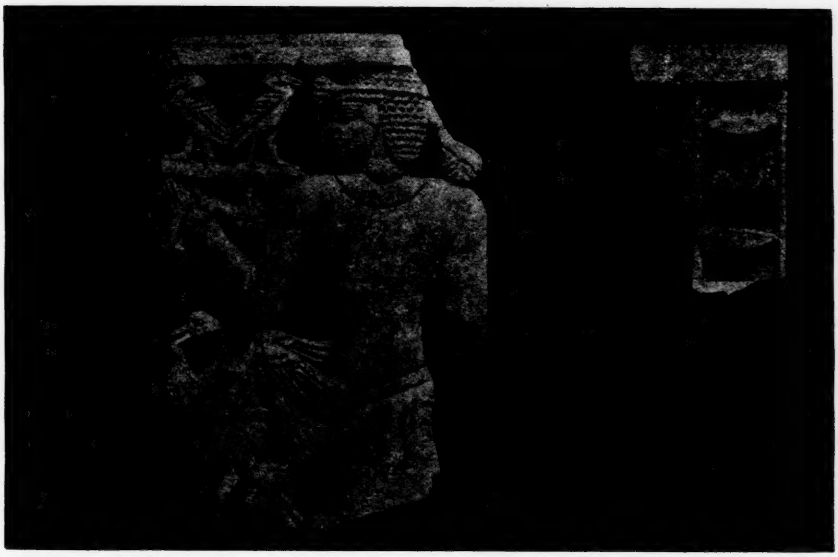


FLINT FLAKES FROM A SMALL TOMB-CHAMBER, MEMPHIS

We found remains of two sanctuaries of quartzite sandstone, one of Amenhotep III, 1400 B.C., the other of Amasis, 550 B.C. The latter gives the best portrait that we have of the king.

The whole site of 50 acres should be searched, doing perhaps a couple of acres each year. Most probably large statues—such as those already found here—will occasionally reward us, and every year a constant supply of discoveries will be obtained.

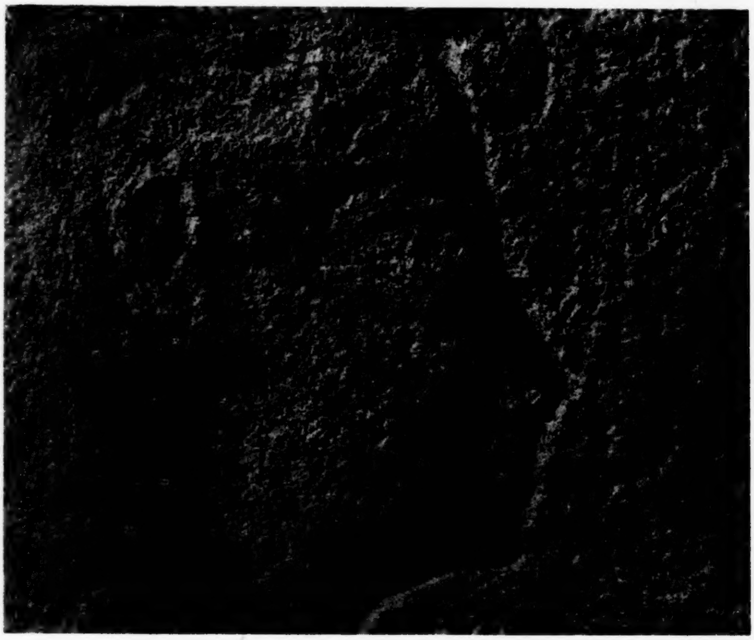
The foreign quarter has yielded many more of the terra cotta heads of various nationalities. Most of them cannot yet be identified owing to the lack of racial portraiture for comparison. But we can see the Iberian, shown by his low flat head and mutton-chop whiskers, belonging to the an-



IVORY CARVING. MAN WITH OFFERINGS

cient Sardinian and modern Spaniard; the Karian, marked by his helmet crest "like a cock's comb," as Herodotus says; the Hebrew by his characteristic physiognomy; and the Kurd distinguished by the crossed turban (not worn by Semites) and by the type of face.

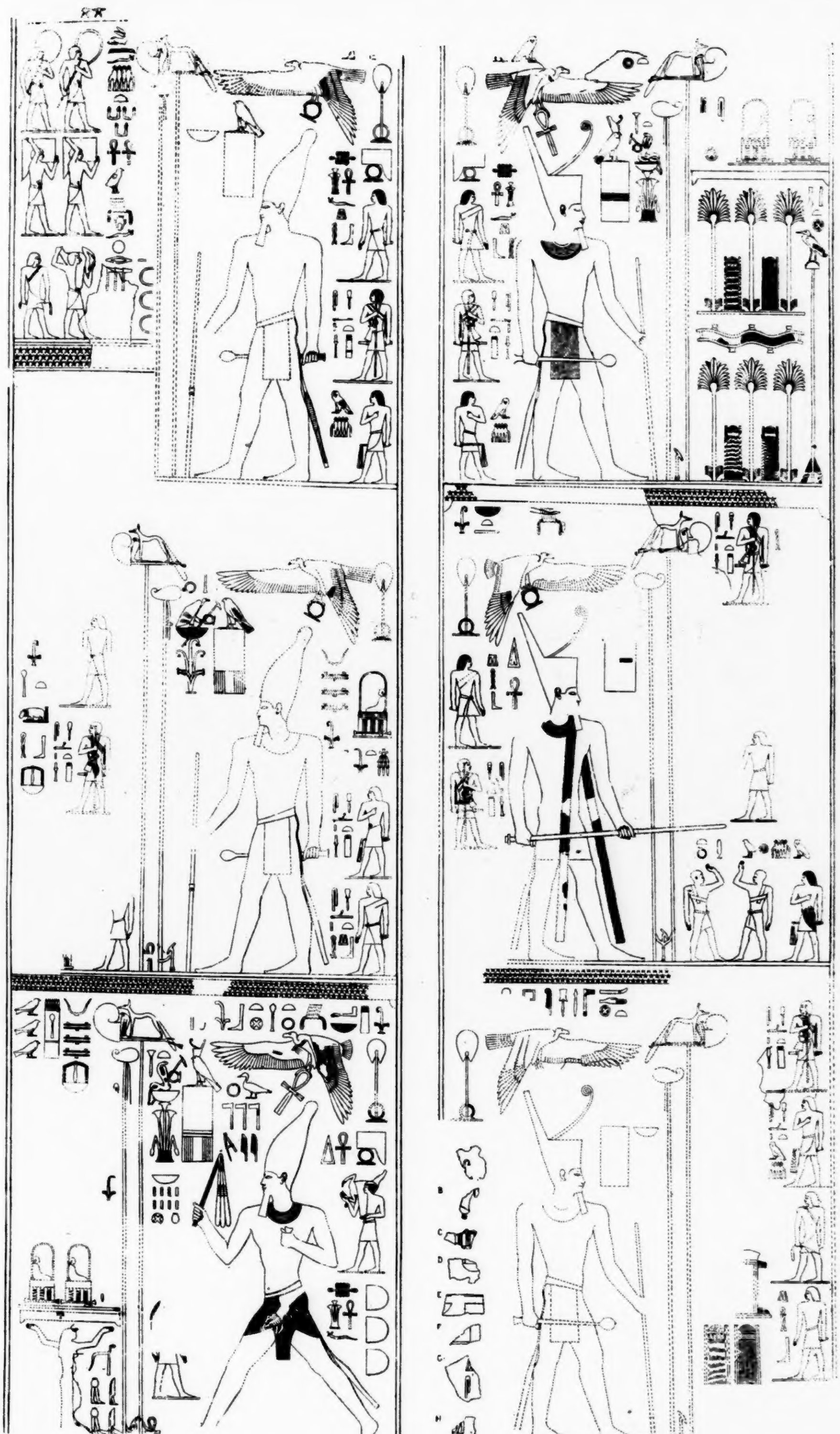
Besides the work at Memphis, much has been done on other sites. At Thebes a rich and perfect burial of the XVII dynasty was found, with furniture, vases in string nets and fine gold-work on the body. This is the most complete burial ever brought to England, and is of unusual type. The series of pottery of the XI dynasty was also fully worked out from a large cemetery, and published.



PORTRAIT OF KING AMASIS, 550 B.C.

At Meydum the cemetery of the III dynasty was worked out, opening two of the greatest tombs which have been seen for 6000 years. In both of these the body of the great noble had been entirely unfleshed and the bones each wrapped separately in cloth. One of the tombs is the oldest private tomb known; and it is far finer than the adjoining pyramid in its chambers. The roofing blocks are 40 tons' weight each; and the granite sarcophagus—the oldest stone coffin known—weighs 8½ tons, and is dressed flat to within a fiftieth of an inch.

The celebrated sculptured tombs—the oldest known—had been severely injured by antiquity dealers, so by official request we moved the whole of the sculptures to museums. Half are in Cairo, and specimens in Chicago, Boston, New York and Philadelphia. The sculpture of the tomb now in



SCULPTURES DEPICTING THE INSTALLATION OF THE CROWN PRINCE

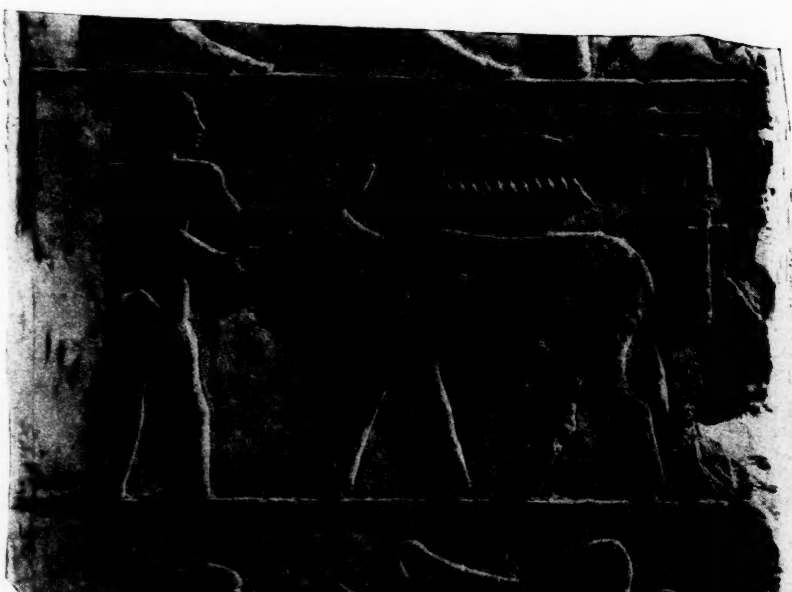
Cairo is some of the finest known; and it was from this tomb that the celebrated statues came of Rahotep and Nefert, which are among the greatest treasures in the Cairo Museum.

In a small tomb-chamber, a group of flint flakes was found, which can be restored to place, showing the order in which they were struck off.

These discoveries are but a sampling of the results of the work of the School in Egypt now being carried on. The whole results are published yearly in two volumes, each given to subscribers of 5 pounds, averaging about 40 plates to a volume. These volumes are distributed to subscribers through the Smithsonian Institution; and Mr. Frederick B. Wright has most kindly undertaken to receive subscriptions at the office of the RECORDS OF THE PAST. All contributions beyond the $10.00 for the two volumes are counted for a share in the antiquities which are all sent to public museums in the United States as well as in Britain and on the Continent.

W. M. FLINDERS PETRIE.

London, November 21, 1910.



SCULPTURE FROM A TOMB FOUND AT MEMPHIS. NOW AT CAIRO

THE EGYPTIAN RESEARCH ACCOUNT

THE work of the Egyptian Research Account, as carried on by Prof. William Flinders Petrie year by year, is one of the most worthy enterprises in the whole field of archæological research. The work, as described by Prof. Petrie in this issue of the RECORDS OF THE PAST, speaks for itself; it is unnecessary to add anything to that statement. But the progress and results of the work are far from being the whole worthiness of this enterprise. The peculiar attractiveness is in the method and the man, and the man has made the method. Only those who have visited the annual exhibit of the finds made by Professor Petrie at Gower St. College, London, and far better still, the great camp among the palm trees at Mît-Rahina on the site of old Memphis can fully understand how much the method and the man add to the work of the Egyptian Research Account. The opportunities afforded not only to professional Egyptologists but to casual students and travellers who are merely ready to see and hear anything of curious interest, are so unique and refreshing in the dry-as-dust atmosphere of the archæological world that they are irresistible. The great camp at Mît-Rahina has announced that the latch-string is always out and out to all, but only those who, like the writer, have drawn that latch-string know how much the invitation means. Here is one of the greatest research works ever undertaken. It is directed by one who, in experience and in the peculiar skill which experience gives, is unsurpassed by any excavator in the world. The work is carried on in the most systematic and scientific manner, so that everything is measured, studied, compared, counted, photographed and recorded, and then, if movable, distributed to the museums. And yet every part of the work is as open for inspection by the expert Egyptologist or the mere traveller as are the industrial plants of the business world. Zealous guards who warn off every visitor as a possible purloiner of secrets which are so annoying to well-meaning students and travellers at other excavations, are unknown here. The long wait of years for the publication of "The Official Volume in Cloth with Gilt Letters," which confronts, perhaps it were better to say affronts, the eager student and the curious public, confronts no one here. Everything is published year by year. The contributor of a pound to the work is as welcome to see all there is to be seen and to know all there is to be known as the contributor of one hundred pounds, and the traveller who contributes nothing but curiosity is as welcome as either. Professor Petrie is interested in living men as well as dead men, in instructing the present world as well as learning about the past world, interesting and helping people as well as guarding a reputation. The reputation in this case needs no such guarding.

As one who, with no claim whatever upon the distinguished professor's attention, has been the recipient from him of the greatest kindness again and again in London and in Egypt, the writer wishes to bear this grateful tribute to the man and his work. The work of the Egyptian Research

Account under the guidance of Professor Petrie is exactly the kind of work which Americans like to support. Here is a work which can be done but once, could not be better done than Professor Petrie will do it, promises the richest archæological returns, and is conducted in a manner to give the greatest pleasure and satisfaction to the contributors and the public as well as to the learned world.

Mr. Frederick Bennett Wright, one of the Editors of the RECORDS OF THE PAST, has been made an Honorary Secretary for America of the Egyptian Research Account. All subscriptions from this side may be sent through him.

M. G. KYLE.

Philadelphia, Pa.

PRELIMINARY WORK IN THE EXCAVATION OF CYRENE.—The commissioners in charge of the excavation of Cyrene for the Archæological Institute of America have appointed Richard Norton director in charge of field work with Herbert F. DeCou and Joseph C. Hoppin on the staff. Mr. Armour, one of the commissioners in charge, sent his yacht to the Mediterranean to transport the staff and equipment from Malta.

In May Mr. Norton made a preliminary visit to the field. While in Bengazi he was informed by Arabs that ruins existed at a place called Messa. In June he visited the site. The ruins lie at the edge of the same plateau as those of Cyrene. Mr. Norton says of them:

"The most important spring is in a hollow, surrounded by quantities of square-cut blocks and traces of buildings. The extensive ruins on the high ground west, north and east of the spring include quarries, in which are many rock-cut tombs, large free-standing sarcophagi and built tombs and platforms of buildings. Of the two clearly marked roads one leads north toward the sea, the second leads eastward toward the Sawiya Beda, the Marabout of Sidi Raffa, and so on to Cyrene. The distance from Messa to the fountain of Cyrene is about 15 miles and for the greater part of the way the road is clearly marked either by tombs and buildings at the sides or by the presence of the actual road-bed. There can be no doubt that this was a main highway from Cyrene to the west, and that Messa was an important offshoot of Cyrene. The character of the remains indicates that Messa was a Greek city, and inhabited at least as early as the IV century B.C."

The site is of such importance that it is hoped that the Archæological Institute may secure the right to excavate it in connection with the work at Cyrene.

THE COINS OF ANTONINUS PIUS

First Paper

THE most superficial glance through a series of coins of the Roman Empire will reveal how strikingly the money of any one reign is distinguishable by certain peculiarities in mintage. The change of portrait on the obverse can not alone account for this difference, though that is perhaps the first to engage the attention; and, certainly, that ever shifting progression of faces on Roman Imperial coins presents a fascinating variety, as contrasted against the more prevailing fixedness of our modern national emblems and mottoes. An amazing diversity is also discovered in the Imperial name, for the several Emperors vacillated widely in their choice of titles. The reverses too run a remarkable gamut in style, ranging from colorless allegorical abstractions to a commemorative chronicle of current events.

But, in addition to these general lines of divergence, there are often more minute particularities, dictated by personal whim or affectation, which, as a rule, make the coins of any one Emperor almost as different from those of other reigns as were the characters of those monarchs themselves. It may even be predicated, that the very disposition itself of the monarch is to be read from his money. Domitian's cowardice is stamped in his *bulla*; his hypocrisy in the title Censor Perpetuus: Elagabalus bears witness to his bigotry by the star in the field: the pious reforms of Severus Alexander are published in his personifications of the virtues: the Constantines attest the new religion by the *labarum* and the monogram of Christ.

It is an interesting quest, therefore, in passing down the series in order of chronology to discover the differentiating features in the coinage of each new reign. The first sensation is usually one of negation,—the characteristics of the previous mintages are first missed, before those of the new are definitely comprehended. This is apt to be one's impression, for instance, in the transition from coins of Trajan and Hadrian, both of them marked by very prominent individuality, to the coins of Antoninus Pius, which are next in succession. We at once note the absence of what had been so conspicuous in the coinage of the last two reigns. Trajan had revelled in the cumulation of *cognomina* that were awarded chiefly in honor of his conquests, till the obverse of even the 'first bronzes' could scarcely contain, in fine lettering withal, the triumphant procession of *Optimus Germanicus Dacicus Parthicus*. But, as 24 years of comparative tranquillity fell to the lot of Antoninus, the latter's money was accordingly spared the incumbrance of those many additional names which his predecessors as well as his immediate successors wrested from the field of war. As a consequence, his coins are rather attractive for the simplicity of their legends.

Another element, which had been one of the distinctive features of the reign just preceding, is now also to be missed in the coins of Antoninus Pius. Hadrian had been a restless traveler, ceaselessly journeying from

one remote Province of the Empire to its antipode. The result was a harvest, all over the Roman world, of ADVENTVS and RESTITVTOR coins. In contrast, Antoninus's long reign of almost a quarter of a century was marked by but one distant excursion,—and that one a dispute among historians. No Province seems to have commemorated in coinage an *adventus* from the Pius Augustus, or to have lauded him as its 'Restorer.'

Yet it was the absence of just these same features which gave to Antoninus the opportunity of developing numismatic styles that were all his own. Far from being rated by what they do not possess, the coins of this reign are as marked by particular traits as any in the Imperial series.

It was the transit, across the writer's library-table, of some scattered coins of Antoninus, that tempted him to a study of the entire period. With Eckhel's *Doctrina* for guidance and a few other handbooks for assistance, it was his first purpose to place the several pieces in their proper relation chronologically. But, under the stimulus of such research, the task grew with surprising momentum. The issue was the present series of papers, for which neither exhaustion of topic nor priority in treatment can with fairness be claimed. Let them be termed, as they really are, a study of Antoninus's money in order of time, in which the implicit leading of the inductive method, as pursued by the writer himself, is faithfully reproduced. Each new feature, as it chances to appear in any one coin, has been despatched at once, in order that its recurrence in succeeding pieces may need no farther attention. The earlier periods have thus been accorded a rather disproportionate amount of space, but with the conviction that this should be conducive to a more intelligent recognition of the subsequent issues.

The several coins shown in the following pages require no other apology than that they were a little handful of Antonine's money that chanced to come under observation. Possessing no particular merit,—indeed their defects are obvious, one may readily believe that they were not such as would be selected solely on account of rarity or beauty. In comparison with the coins of the Early Principate exemplified in a previous issue of RECORDS OF THE PAST,[1] these 8 from the reign of Antoninus Pius at once revealed rather a diminution in perfection and symmetry. Some of the pieces were thick and clumsy in appearance, many of them quite out of the circular. One was almost a square, with simply the corners rounded off. Generally speaking, they lacked the *finesse* and attractiveness of, for instance, Trajan's money. A debaseness in metal also evidently attended this decadence in art. Neither were they in good state of preservation. Several were so defaced in one particular or another, that it was problematic to place them successfully, though enough was usually in evidence, to identify them as coins of Antoninus. When the legend was deficient, it was the Emperor's portrait that afforded the clue,—for Antoninus looks the same throughout,—or, when the portrait was dim, the legend in its turn came to the rescue. Yet, with all their blemishes, the group, as herein reproduced, may be of service in illustrating the coinage of the period.

It was on the 25th of February, 138 A.D., following the death of Ælius Verus the heir-presumptive, that Hadrian, with exemplary wisdom,

[1] Volume IX, Part I, January-February, 1910, pp. 42 and 43.

promoted Titus Aurelius Antoninus from his cabinet of privy advisers to be his successor. This system of adoption or of association in the Imperial offices which had thus far become an unwritten law of the Principate, often imparted great complexity to the Imperial coinage, for the privileges of coining money were shared in common by the joint Emperors. When a considerable period chanced to elapse before the assumption of sole power by the junior Imperator, as happened with the younger Flavians or with Antoninus's own successor, Marcus Aurelius, an extended system of preliminary mintages naturally resulted before a more independent coinage was made possible by the death of the elder sovereign. Trajan, Hadrian, and Antoninus, all three in turn, were fated to succeed their adoptive fathers very shortly after their association in the Principate, so that, in their cases, we have no very prolonged study of what we might term prefatory coins.

But, brief as was his term of Caesarship,—hardly more than 4 months, from March of 138 to the following July, Antoninus's coinage must be reckoned as beginning with a group of gold and silver coins which he issued during that time, accompanied by corresponding bronzes from the Senatorial mint.

On all these, Antoninus was represented with head bare, for the Junior Emperors of this era were not uniformly accorded the privileges of the several crowns. On his own private coins, the obverse bore the legend:[2]

IMP(erator) . T(itvs) . AEL(ivs) . CAES(ar) . ANTONINUS.

In several respects this was a style of legend never before seen on Roman coins, though this should be no surprise, as each successive Imperator was almost certain to introduce some innovation or other in that particular. Not that any one individual element in this formula was new,—it was the combination and placement that entailed variations from precedent. This will be best appreciated, if each factor be first severally discussed.

As to the origin of the several names that were here involved, the *prœnomen*, Titus, and the *cognomen*, Antoninus, were inheritances by ancestral right. All the rest were new acquisitions by virtue of adoption. Taken as a whole, they still form merely the personal name of the prince and heir, and include no strictly official title. It is true that Imperator was originally a title, but the practice of the last century had reduced it to the force of a royal *prœnomen*, as its position in the list here shows. Not only does it occupy the first place, where we always look for that portion of the Roman name, but it is followed immediately by Titus, the ordinary *prœnomen*. Though still implying the rank of a Commander-in-Chief in the armies, Imperator was now more a matter of succession, such as are the modern titles Prince, or Count, or Duke, which no longer carry their original intent. Yet, side by side with this modified connotation, there was an occasional return to the old-time usage, illustration of which will be found in some of the later coins of this same reign.

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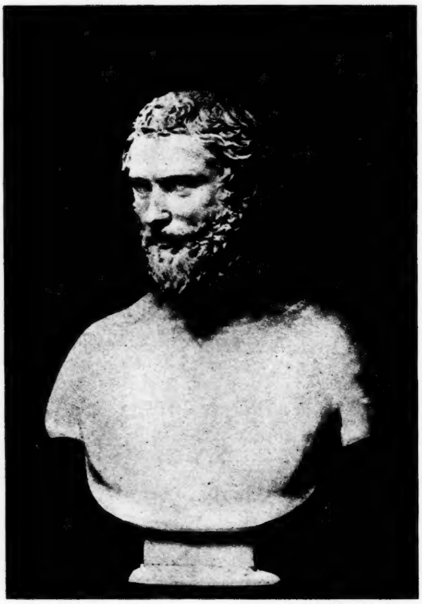
[2] Eckhel, p. 2, A. Unless otherwise designated, the references to Eckhel imply Vol. VII. Schneider, *Das Alte Rom*, Taf. XII, 5 [after Imhoot-Blumer, Taf. II, 38] illustrates the obverse of one of these gold coins.



ANTONINUS PIUS. COPENHAGEN MUSEUM

As a result of the acquisition of civic and military honors, the Emperors usually suffered their inherited family names to be largely crowded out of their monetary inscriptions. One family name, such as Domitian or Hadrian, generally sufficed. In this curtailment, the *prænomen* suffered most of all, for it was not an indispensible factor in the throne-name. Its chief usefulness was from a differentiating view-point, so that it was rarely employed under the Principate, save to distinguish the several members of the reigning dynasty, as had been necessary with the Caesares Tiberius and Gaius (Caligula). Its presence here in Antoninus's formula indicates a wish on the part of the new heir to be distinguished from the late prince, whose adoptive name had also been Ælius, as well as from his own adopted son, who now became Marcus Ælius. Ordinarily an Ælian was an Ælian without need of prefix, but Titus Ælius must now be spared confusion in his formal inscriptions, especially since coins of the deceased Lucius Ælius were still in circulation. Thus we find Antoninus's coins for a short time after his adoption, and sporadically afterwards, bearing the distinctive *prænomen*. It was a feature that had not appeared upon the imperial coinage since the days of the Emperor Titus, whose name throughout was that of his father, Vespasian.

The *nomen*, Ælius, and especially its position in the formula, entailed the widest departure from the established styles. Previous Emperors had varied much in their attitude toward the family *nomen*. The majority had habitually suppressed it. Cocceius and Ulpius and Ælius do not occur

in inscriptions upon money or monuments of the three preceding Imperators. But the late crown-prince had renewed the practice, last employed by Vitellius, three-quarters of a century earlier, of including the *nomen*, and Antoninus now followed his example, especially, in some of his longer formulæ, as here evidenced in these earliest coins.

Since the days when the great Dictator first gave the name Caesar a significance, the latter had already passed through a variety of usages, prophetic of yet farther adaptations in subsequent centuries. Politically and socially, the Emperors were heirs of the Caesars, though the divine blood of the originals had long since filtered out. The name was by this time tacitly accepted as the inheritance of the throne and was seldom omitted from the fuller and more formal crown-title. Its position was, however, a subordinate one. For instance, it was not commonly included unless the formula began with Imperator, which, in the omission of the family *prænomen*, it most frequently followed, as witnessed in coins of the preceding reigns since Vespasian's time. But the family *prænomen*, when used, was ordinarily placed between Imperator and Caesar,—such had been the practice of Titus Vespasian.

Thus far, in the development of his formula, Antoninus had abundant examples to follow; but, in introducing the *nomen* too at this point, in the stead of the more usual *cognomen*, a third element was thereby allowed to take precedence over Caesar, while the *cognomen*, though following Caesar, was at the same time given prominence over it by its very position, unabbreviated, at the end of the list. The evolution of the legend into the style which Antoninus here used, may be illustrated from the following formulæ of three several Emperors:

IMP . CAESAR . *VESPASIANVS.* AVG.
IMP . *TITVS* . CAES . VESPASIAN . AVG . P . M.
IMP . T . AEL . CAES . *ANTONINVS.*

Yet the above formula did not become a fixed practice with Antoninus, for we shall find several instances, even with the family *prænomen*, of a return to the old grouping that had been so general under the Flavians and Trajan.

Since the times of the Julian-Claudian House, when the name Caesar was still a family *cognomen*, Galba had been the only Emperor in the past who had used all three portions of his family name in any one numismatic formula. But Galba had arranged his longer lists quite differently, always keeping his inherited names unseparated, either placing them in an unbroken group between Imperator and Caesar, thus: the Imperator Servius Sulpicius Galba Augustus, with Tribunician Power, or placing Imperator and Caesar together at the close, thus:

SERV . SVLP . GALBA . IMP . CAESAR . AVG . TR . P.

In short, it is quite evident that sequence in the elements of the royal 'cartouche' was a principle never rigidly insisted upon. Some Emperors, like Commodus, went to great lengths in the flexibility which they admitted. Antoninus seems to have observed a fair mean.

The shortened form ÆL. rather calls for comment. Epigraphic custom had usually kept the *nomina* intact, permitting their abbreviation only under stress of necessity. But the narrow compass of a coin had long since broken down all such compunctions, demanding curtailment that would be unusual otherwise. There need be no surprise in finding ÆL. for ÆLIVS here, for the consular coins of the Republic had made forms like POM. for POMPEIVS, and TER. for TERENTIVS, and VAL. for VALERIVS, as common as the coins themselves. As few of the Emperors had employed the *nomen* at all, there are accordingly fewer examples of abbreviation on Imperial coins, though Claudius and Nero both emplyed CLAVD., while Galba countenanced SVLP. and other forms.

But in his attitude toward the *cognomen*, Antoninus was strikingly persistent. This one portion of his name he never suffered to be abridged. Not a single coin bears such a form as ANT. or ANTON., though he himself consented to HADR., while the Flavian Emperors had used VESP. and DOMIT. Even ANTONIN., after the analogy of TRAIAN. and HADRIAN., *i.e.*, with simply the curtailment of the case ending *-us*, might have been expected: but not so,—it is ANTONINVS throughout, without a single exception, a consistency hitherto unparalleled in Imperial coinage and seldom equalled subsequently.

By reference to their reverses, these gold and silver coins of the Caesar Antoninus, whose obverses have just been under discussion, fall into two general classes, though the second may be considered an extension of the first. The two types, it will be found, were very natural outgrowths of the Dual Principate and the system it entailed.

When the obverse of a coin contained merely the personal name of the Emperor, as do all these earlier coins of Antoninus, a very common type of reverse, throughout the whole Imperial series, involved a supplemental formula detailing the more official titles. As the Tribunicial Power was renewed annually, while the Consulship was claimed by the Imperators just often enough not to make it a continuous office with them, it may be observed that the enumeration of the repeated holdings on either obverse or reverse had the effect of imparting to that face of the coin a semblance of dating. Yet the intent to date a coin in so doing seems not to have been primal; it was rather more incidental. Since, from the second year of his Imperium, Antoninus all but ignored the number of his Tribuneships and yet, meanwhile, repeated his last holding of the Consulship for 4 years in succession, we may seriously question whether, after all, there was so much a wish to designate the year of the mintage, as to indicate the Imperial honors.

In conformity with this system of balance in the list of names and titles, we are prepared to find on the reverses of these first coins of Antoninus the following inscription:

TRIB(vnicia) . POT(estate) . CO(n)S(vl) .

i.e., 'Invested with the Tribunicial Power, Consul.'

Some of these reverses have the legend PIETAS prefixed, thus form-

ing the second class aforementioned.[3] The central device of these latter is a woman, the personification of Piety, approaching an altar on her right, toward which she is extending grains of incense in her right hand. In this figure of Piety, which often recurs upon coins of this reign, we have, thus early, a premonition of that epithet which was to cling so tenaciously to Antoninus and have an ineradicable influence upon generations of princes to come. The allegory of Piety was, so to speak, the collotype of this goodly great man.

Antoninus's bill of adoption had included association in the Tribunician Power and in the Consulship as Pro-Consul. These comprised the sum total of civic honors that could be possessed by the junior Imperator at this era. So, from these reverses, Antoninus may readily be recognized as the junior sovereign, not so much because of the titles there given him, as because of the absence of others; for all the names and titles thus far employed on his coins, on both obverse and reverse, were also factors in his later and complete formulæ as sole Imperator. But there were other offices as yet withheld from him,—higher powers, the perquisites of the elder Emperor, which Hadrian accordingly reserved for himself. Such were the titles of Augustus,[4] Pater Patriae, and Pontifex Maximus, some or all of which, at this period of history, appear almost invariably on coins of the senior or sole Emperor, but never on those of the junior. The absence of these, the most important titles of all, relegate any coin to that period of apprenticeship, when the Caesar was still only associate and heir.

In the case of Antoninus there was another feature which indubitably characterizes his later as distinguished from his earlier coins,—the *cognomen* Pius, which he was soon to receive and never thereafter to omit from his monetary inscriptions.

The order in which the two honors are listed on the reverse is most suggestive. There could be no sureer evidence that the old régime had passed away,—the Consulship had ceased to be the climax of civic authority. Its value under the Empire was chiefly honorary. The Emperors themselves were rather indifferent as to its possession. On the other hand, the Tribunician Power was indispensible to the dignity and inviolability of the crown. The much abused office of the Tribune of the Republic was now advanced to a rank above that of the Consul and hence takes precedence in titular language whenever the two chance to be expressed together. Whether Antoninus himself wholly concurred with this attitude may be questioned. Some of his subsequent coins seem to illustrate a skepticism on his part as to the wisdom of the prevailing sentiment.

It will be noticed that no numeral accompanies the titles on these coins now under discussion. The first holdings of office were never numbered, for the very obvious reason that a second term ever 'lies on the knees of the gods.' On the other hand, the numerals were not always employed

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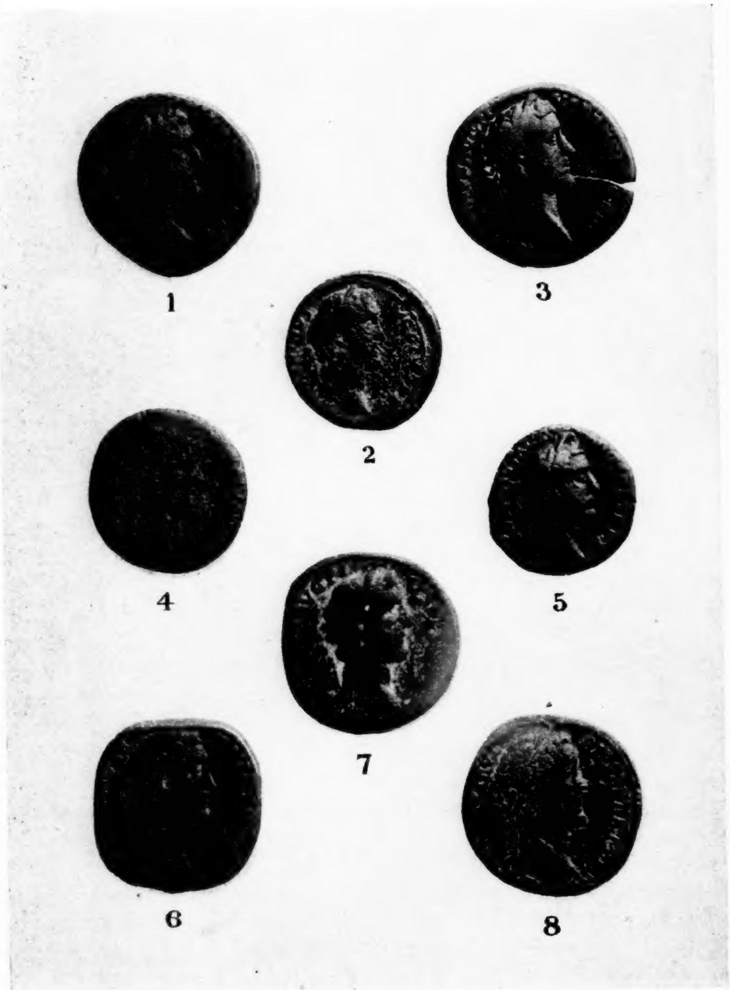
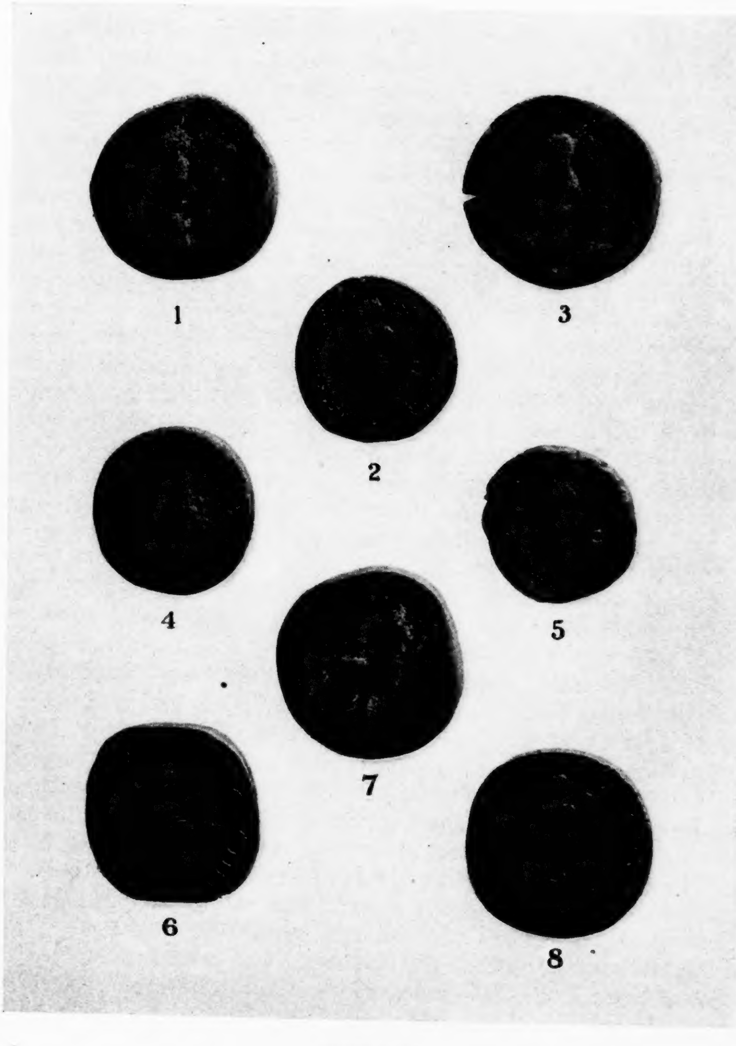
[3] One gold issue of this latter type shortened the abbreviation TRIB . to TR. Cf. Ackerman, p. 258, no. 39. References to Ackerman, unless specifically mentioned, imply Vol. 1.

[4] I find that Egbert's *Latin Inscriptions*, p. 133, gives to Antoninus the rank of Augustus contemporaneously with his adoption. No coin, however, shows the presence of AVG . in company with TR . POT . COS., without also PONT . MAX. The testimony of numismatics is, therefore, that the title AVG., together with that of PONT . MAX., was conferred on his accession as sole Imperator.



OBVERSE
COINS OF ANTONINUS PIUS



REVERSE
COINS OF ANTONINUS PIUS

by the Emperors, even in the case of extended tenure,—for example, Antoninus himself did not begin to number his Tribuneships consecutively until the Eleventh Year. Nevertheless, the absence of the numerals here, together with that of the higher Imperial offices, is rather conclusive evidence for the dating of these coins during the months of Caesarship.

The COS., however, is misleading. Not only had Antoninus held the Consulship once before,—that had been in 120 A.D., 18 years previous, but, strictly speaking, he was not even now Consul. His proper title was Pro-Consul,—conveying simply the idea that he was invested with the powers of Consul, though not actually holding the office of Consul. The suddenness of his appointment had not permitted the usual formalities of nomination by the Emperor and subsequent ratification in the prescribed way. Moreover, the Consuls for the year had no doubt long since been scheduled and the program could not with propriety be interrupted. If he were now Consul in the regular style, he would have been termed COS. II. on these coins, for, when the Emperors expressed their Consulships at all, they always reckoned also those which they had served previous to their ascension. Thus the Emperor Titus had been 7 times Consul during the reign of his father, so that, when Consul again during his own Principate, he was termed COS .VIII. Again, on the other hand, Antoninus can not here be considered as Consul Elect, for, a little later, he was formally elected for an actual second term and thenceforward, until he entered upon that year of office, in January of 139, he appeared upon his coins as CO(n)S(vl) . DES(ignatvs) . II.

While the Senate had in their keeping the coinage of brass and copper, it may be questioned whether their rights were entirely unlimited. There is too much suggestion that they were not always independent in their choice of types, devices, and legends. We may safely infer that individual Emperors often, if not regularly, submitted designs for the Senatorial mintages. At any rate, that body evinced respect for the designs that the Emperors followed in their private coinage. The gold and silver coins, as a frequent result, had their reflection in the brass pieces. For every *aureus* or *denarius*, there could generally be found a *sestertius* or a *dupondius*. While this was not by any means a regularity, it will be interesting in our study of Antoninus's coins to note how frequently the Imperial and Senatorial mintages go in pairs. The presumption, in such instances, is of course plausible, that the Senate modeled their new issue of bronzes after the last emanation from the Emperor's own private mint.

So, in these first coins of Antoninus, there were bronze pieces of the first and second size that corresponded with the gold and silver money just described. They fall, by virtue of their reverses, into the same groups, *i.e.*, with and without PIETAS. The reverses have the same devices, while the obverses carry the same portrait of Antoninus with the bared head. The formula of the obverse, wherein we might look for surer test, is also the same, with the exception that the larger size of these brass coins made it possible to employ the unabridged AELIVS . CAESAR.[5]

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[5] Eckhel, p. 2, B.

But, side by side with these, there was one group of 'middle bronzes' in which the Senate was certainly independent of any present model from among the coins of rarer metals. The obverse is identical with that of all the others, but the reverse seems to prove the coin a memorial from the Senate in celebration of the new Caesar's adoption. In conformity with a practice of numismatic courtesy that often passed between associated Emperors, the obverse did honor to Antoninus the Caesar, while the reverse conveyed the same compliment to the elder Imperator, bearing the head of Hadrian, with the inscription:

HADRIANVS . AVG(vstvs) . CO(n)S(vl) . III . P(ater) . P(atriae) .[6]

In some, the formula was simply:

HADRIANVS . AVGVSTVS .[7]

This is clearly not a coin of the CONSECRATIO or DIVVS type. It is the living Hadrian who is here commemorated, for, agreeable to the system regulating the distribution of Imperial offices and restricting the higher titles to the senior associate, he is here styled Augustus and Father of the Country, to which others could have been added.

If farther argument were needed for the dating of the coins thus far detailed, it is to be found in the identity of obverses. Since the obverse of these pieces in honor of Hadrian is the same as that of the PIETAS coins and of those with the unnumeraled reverses, the same date must unquestionably be assigned to all,—a period anterior to the death of Hadrian.

The end had come swiftly,—10 July, saw Antoninus sole Emperor and invested, perhaps immediately, with the titles Augustus and Pontifex Maximus. The first had become the indispensible property of the sole Princeps,—'His Majesty,' as it were; the latter designated him as Chief Pontiff, head of the state religion of Rome. The eulogistic title of Pater Patriae had not yet become an inherent accompaniment of accession. In Antoninus's case, it seems to have been deferred a full half-year at least.

From the moment of his ascension, until the climax was reached, sometime in 139, in the complimentary title 'Father of His Country,' Antoninus's coins reveal a steady increase in honors. Some silver coins from the new Augustus's own mint very shortly attested the advancement of the erstwhile Caesar.[8] These bore on their obverse the echo of his earlier silver coins,—the same bared head, the identical formula with the same abbreviations,—the addition of AVG . alone indicating, as far as could be read from the obverse, that there had been any change whatever in the imperial régime.

The two new honors were divided between the faces of these silver coins. The obverse had closed its formula with Augustus; we may now conceive of the reverse as continuing the name with:

PONT(ifex) . MAX(imvs) . TR(ibvnicia) . POT(estate) . CO(n)S(vl).

It is identical with the inscription of the Caesar coins, with the exception

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[6] Ackerman, p. 270, no. 13.

[7] Ackerman, p. 270, no. 12. Eckhel does not note this form. Patin, p. 216, illustrates both faces of this latter issue.

[8] Eckhel, p. 3.

that the sacerdotal honor is prefixed and the second title has a shorter abbreviation, though this had been exemplified in a few gold coins of the earlier issues. The choice of abbreviations was always largely determined by the spacing that was required. In this instance, the addition of PONT. MAX. rather demanded that the former TRIB. POT. should now become TR. POT. Farther accretions in the list of titles were soon to reduce it to the more frequent form TR. P.

As for PONT. MAX., Antoninus used the longer form but seldom, doubtless prompted to do so in this case by the general brevity of the formula. This particular issue and a later brass medallion in which PONT. MAX. is the sole inscription,[9] are apparently the only examples of its use in this reign. In coins soon to be noted, where the formulæ were somewhat longer, Antoninus had recourse to the P. M., so familiar upon coins of the preceding reigns.

The regular position of the priestly title was a place of honor, immediately following the personal names and having precedence over the other official titles. But custom had been quite unsettled as to whether obverse or reverse should own it. The same Imperator would employ it now upon one face of the coin and now upon the other, so that any apparent neglect in one coin, if indeed a place on the reverse was deemed a lesser honor, would be counterbalanced by respectful attitude in another. It is surprising to find that Antoninus never accorded it a place on the obverse, but,—a still more remarkable fact this,—after the second year of his Principate, he ceased to employ the title altogether.

Evidently, the elevation to the sole Imperatorship entailed no interruption in either the Tribunicial or Pro-Consular office. These may have been continued by formal enactment,—at any rate they were not renewed, for again the absence of the numerals is conclusive proof that this was merely a continuation of the first holding.

A second issue of silver coins either was contemporaneous with those last mentioned, or shortly followed. The reverses[10] are identical in legend with those just described, but the obverses introduce the first variation in the language of the Emperor's name. The *prænomen* Titus is omitted, while Caesar leaps over the *nomen* Ælius, to take place after Imperator, resulting in the following unprecedented formula:

IMP. CAES. AEL. ANTONINVS. AVG.

The *prænomen* was of course becoming less and less essential, the farther removed in time was the death of the former heir-apparent. Antoninus, however, after having once begun its use, never wholly relinquished it, but would return to it after an interval. The omission of Titus, therefore, is not a radical matter, while the combination IMP. CAES., as an introductory group, was long established. But the latter had always before been followed by *cognomina*, either singly or in combination, such as Domit-

[9] Ackerman, p. 262, no. 18.

[10] One of the notable silver coins with this style of reverse represented a figure standing, holding a bow and arrow,—Ackerman, p. 258, no. 40. As Ackerman's lists include reverses only, this last coin may belong to either one of the two silver issues.

ianus or Nerva Traianus. Antoninus was thus the first to use the *nomen* in such a position in the formula.

The ascription of all these silver coins to the first few months of sole Imperium can not be questioned. In addition to the argument from the absence of the numerals, Pater Patriae and, above all, Pius are not yet in evidence. From the time when these latter were severally awarded him, Antoninus never omitted them.

These silver pieces were not accompanied, it would seem, by corresponding mintages from the Senate. Either the issue of the Caesar bronzes had been quite recent, or another honor was now anticipated, which the Senate contemplated being first in the field to celebrate.

It was of course to be expected that the new Emperor would, at the earliest possible opportunity, be one of the two Consuls from whom a new year should receive its name. Shortly after his accession, therefore, Antoninus must either have sanctioned Hadrian's nominations for the ensuing year, if the latter had made any before his death, or have empaneled a fresh list of his own. In either case, deference to established custom and the dignity of the throne dictated the placing of his own name at the head of the list as ranking Consul for January of 139 A.D. As soon as the formal ratification could be procured, Antoninus became Consul Designatus II., *i.e.*, Consul Elect for the Second Time.

The reverse of Coin 1 (Plate II), though itself later in order of time, chances to be identical with that of the 'first brass' which the Senate now issued, and through which they became sole heralds, numismatically, of the new honor, for no farther coins of the higher denominations seem to have been issued by the Emperor himself until after the acceptance of still another title. The next coins from the Emperor's own mint were the richer by two honors at once.

The obverse of this 'first brass' followed the legend of the last silver issue, though with AELIVS written in full. The reverse of the illustrated coin has lost its legend, but comparison shows it to have been:

P(ontifex) . M(aximvs) . TR(ibvnicia) . POT(estate) . CO(n)S(vl) . DES(ignatvs) . II.

The device, however, is rather more apparent,—a woman, standing, holding a branch in her right hand, and resting a cornucopia in the hollow of her left arm.[11]

Just when the name Pius was first applied, and whether by formal decree from the first, or whether legislative enactment followed a popular acclamation, are still disputed points. There is diversity of opinion as to whether Antoninus acquired the name while still the adopted son of Hadrian,—and the PIETAS coins of his Caesarship period rather bear out this view,—or as a result of filial affection demonstrated after the death of Hadrian, or in honor of his general reputation for gentleness and benevolence. The study of numismatics has at least proved that the name did not become formally a fixture until after Antoninus had become Consul Designatus II., for no coins are extant in which PIVS appears with COS.

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[11] Eckhel, p. 3.

alone, or without AVG. also. The appellation, if indeed it had been freely used before, was established by decree of the Senate and subsequent to the death of Hadrian.

The name and its employment by Antoninus strongly suggest Trajan and his epithet Optimus, which was prized by its possessor as second only to that of Augustus. And now, Trajan's grandson appropriated Pius almost to the exclusion of all other parts of his name. Once adopted, it was never omitted. History knows the Emperor himself, not as Antoninus, but as Antoninus Pius, a distinction which posterity has denied to Trajan Optimus. Later Emperors, in imitation of the first-named Pius, coveted the designation, until it became a sort of appanage of the Imperial name, so regularly used as eventually to bring upon it the fate of all commonplaces,—abbreviation. The combination P.F., *i.e.*, PIVS . FELIX, 'the Pious and Fortunate,' came to be as constant a factor in the throne-title of the III and IV centuries as are H.R.H. in the court terminology of England.

There were many mintages of various types in both gold and silver, during the latter half of 138, all of which bore practically the same legend, all containing the name Pius. In these coins of Antoninus's own mintage, there were some in which the Emperor clung to the stereotyped portrait which had been current since the days of his adoption. But it is interesting to note, that, contemporaneously with the acceptance of the name Pius, there now appeared other coins of this same group in which he was represented as laureated. One is inclined to accept this laurel crown as a matter of course, for, since that decree of the Senate, long, long ago, when the first Julius was awarded the special distinction of wearing the *corona laurea*, succeeding Imperators had appropriated that same privilege with rather persistent uniformity. The laurel crown, as the Imperial coinage attests, came to vie with the purple as a symbol of sovereignty. Indeed, after the Principate became well established, a bared head of the reigning Augustus was a rarity, except in a very few coins of the costlier metals and occasional pieces in honor of deification.

But Nero's bold precedent in authorizing the use of the radiated crown on his own coins and thus anticipating the prerogatives of apotheosis, had introduced a divergent possibility, of which his successors for almost a century had not been slow to take advantage. The 'middle bronzes' eventually divided the honors rather evenly between the two forms of coronal head-dress. Certainly the practice of the Flavian Imperators and of Trajan had been to saction the *corona radiata* quite as often as the laurel in the brass coinage of their reigns.

Hadrian was the first to make any marked deviation from the prevailing custom. An Emperor who could wander over the world with uncovered head as he did, might be expected, when he sat for his portrait, to look upon the crown, whether radiated or laurel, as a non-essential and so to discard it on occasion. A few of his own coins, therefore, as well as of those struck by the Senate, represent him with head bare. Of Hadrian's 'middle bronzes,' there is perhaps the usual proportion in the two styles of crown.

Antoninus, however, pressed this revolt against the established etiquette of numismatics a great deal farther. It seems altogether in keeping with this prince of unassuming dignity, that he should regard the crown even less a necessary adornment than had his eccentric predecessor. The coinage portraits of Antoninus with bared head are therefore numerous, in every metal and of every size and style. The *caput nudum* invaded even the province of the 'middle brass' and asserted itself side by side with the two crowns.

When constrained to choose between crowns, Antoninus's rather democratic tendencies seem to have dictated a preference for the laurel. His laureated coins noticeably outnumber those with *caput radiatum*. Reproductions of his coins in the popular hand-books are so generally those with bare-head or with the laurel, that one rather hesitates to think of Antoninus in the radiated crown.

Thus it is not wholly by chance, that the 8 coins illustrated in this series of papers present Antoninus laureated, although another group, even a smaller group, might contain some portraits of the Emperor in the radiated crown, or rather without crown at all. The group is at least significant as showing that Antoninus, if crowned, preferred the laurel.[12]

The legend on the obverse of these last-mentioned issues returns to the earlier formula with the *prœnomen*, but contains an important variant in the interpolation of the adoptive name Hadrianus, which is given a place just preceding the *cognomen*. The inscription thus reads:

IMP . T . AEL . CAES . HADRI . ANTONINVS.

In some, the abbreviation HADRI drops the final I.[13]

It is again significant, as heretofore remarked, that the Emperor consented to the abbreviation of this adoptive name, as well as of all his other names, except his own *cognomen* and Pius. On the whole, Antoninus's attitude toward his adoptive *cognomen* contrasts rather strongly with that of Trajan and Hadrian toward theirs. Both the latter had largely employed them, especially toward the beginning of their reigns, as if expressive of their right to the throne by adoption. Antoninus, on the other hand, did not use HADRIANVS at first, and resorted to it rather infrequently throughout his reign.

Such an array as we have here in these three family names in addition to the one which was distinctive, T . AEL . HADRI . ANTONINVS, was thus far a novelty on Roman Imperial coins. But inordinate reduplication of names was rapidly becoming a widely extended practice. Antoninus himself had had no small list from which to choose. But, to do him justice, the chronology of his later coins shows that he decidedly favored the simple Antoninus Pius and it is especially to his credit that he was not forced to this shorter form by the press of additional titles.

But it will have been noticed that neither PIVS nor AVG. appear upon the obverse of these coins from the Emperor's own mint. It was

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[12] Since writing the above sentence, there has come to hand a catalogue of the collection of 'Roman Coins at St. John's College,' listing 20 pieces under the name of Antoninus, only one of which shows the *corona radiata*.

[13] Eckhel, p. 3.

left for the reverses of all these to proclaim, for the first time in money this momentous message:

AVG . PIVS . P . M . TR . P . COS . DES . II.

And so, the name Pius had at last made its appearance, but in unexpected humble guise, and with Augustus in its company. It had been accepted as almost canonical, that Augustus, as the highest possible honor, should be given a place of prominence on the obverse. There had been one short period of aberration under Nero, Galba, and Vitellius, while, since that time, but one coin of Vespasian and two of Hadrian's had witnessed a lapse. The scarcity of instances is quite remarkable. Therefore our surprise is the greater to find that, of the 17 or more differing styles of title which Antoninus employed after his assumption of sole power, there were two, numbering, however, many issues, in which Augustus and Pius were thus, as in this last coin, relegated to the reverse. Not only did it mean a displacement, as it were, of the ranking title of Roman Imperial royalty, but it would seem to indicate that Antoninus did not at once appreciate, as he certainly did afterwards, the uniqueness and majesty of his new *cognomen* Pius.

The first of our illustrated coins now finds its place in the chronology of Antonine's money,—a 'middle bronze,' probably the last coin of the year, in which the Senate now first indulged in their eulogium of Pius. The Emperor is laureated, though these bronzes shared the characteristics of the Emperor's last coins, after which they were modeled to a certain extent, and therefore some of the group represented the Emperor with bared head. The portrait is quite clear and readily recognizable,—indeed, one familiar with the portrait-busts of Antoninus in any of the European galleries, such as that in the British Museum or the one in the Glyptothek Ny Carlsberg at Copenhagen, a cut of which is here shown, could not mistake the dignified, benevolent face on this coin and its companions to follow. No corroboration is needed from the encircling legend,—for this is indisputably the Fourth of the 'Five Good Emperors,' the Imperator Pius as he is pictured in the pages of *Cassius Dio and Capitolinus and **Marcus Aurelius**,* renowned and beloved for his justice, his sobriety, his gentleness. His very beard seems in harmony with his virtues,—it has a tendency to invest Antoninus with a maturity and a benignity which contrast strongly with the ever youthful and aggressive face of Trajan, or the sharp, nervous features of Hadrian.

The legend of the obverse is either badly executed or severely mutilated. It is the same as in the higher denominations just described, but with the first two titles of the reverse appended to that of the obverse, as more consistent deference would seem to dictate. Thus we now have:

IMP . T . AEL . CAES . HADRI . ANTONINVS . AVG . PIVS.[14]

The PIVS on our coin is quite indistinct, though there can be no doubt that it should be there. Attention may be called in passing to the wide spacing above the Emperor's head, between the T and O of ANTONINVS,—a feature which will be noted in several of the succeeding coins.

[14] So, Eckhel, p. 3, but our coin omits the final I of HADRI, showing that this brass issue admitted the same variants as did the preceding issues of gold and silver.

The transference of the AVG . PIVS. to the obverse leaves the inscription of the reverse exactly the same as in the Senate's last issue, though it could hardly be surmised from the present state of this one coin. There are only dim traces of

P . M . TR . POT . COS . DES . II.

The device, however, is more discernible,—the standing woman, with the branch in her right hand and the horn of plenty in the hollow of her left arm. The reverse is thus identical throughout with that of the last Senatorial coin. The Senate had merely altered the obverse of their last issue.

The year 138 was now drawing to a close. We shall soon find Antoninus beginning the New Year of 139 with added honors and new mintages in contemplation.

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PRELIMINARY REPORT TO THE MINNESOTA HISTORICAL SOCIETY ON THE KENSINGTON RUNE STONE[1]

EARLY in 1910 the Minnesota Historical Society undertook a careful investigation of the claims of the Kensington Rune Stone to determine its authenticity or fraudulent origin. With this purpose Prof. N. H. Winchell made three visits to the locality and various linguists have examined the inscription to determine whether it could have been written in the middle of the XIV century. The results of these several lines of investigation are combined in the report of the Museum committee to the Historical Society and while it does not definitely settle the question it clears up a number of points and reduces the discussion to a few essential features of the inscription.

The general description of the stone, its discovery, and the translation of the inscription is well covered by the article in Records of the Past for January-February, 1910, by Dr. Warren Upham. The linguistic difficulties were well discussed by Mr. H. R. Holand in the September-October issue of Records of the Past, 1910. In view of this we will confine our attention to other points not previously discussed in our magazine.

There are several references in the inscription to topography, location and natural objects which have been verified. The following are of special interest:

(a) Their camp was near two rocks in the water (skerries), one day's journey north from the stone;
(b) The location of the stone was on an island;
(c) The sea was 14 days' journey from the stone (doubtfully 41).

(a) Professor Fossum and Mr. Holand searched about lake Christina, Pelican lake, and other lakes, lying about one day's journey (20 miles) toward the north. The

[1] Summary of the Preliminary Report to the Minnesota Historical Society by its Museum Committee on the *Kensington Rune Stone*. Published by the Society, December, 1910.

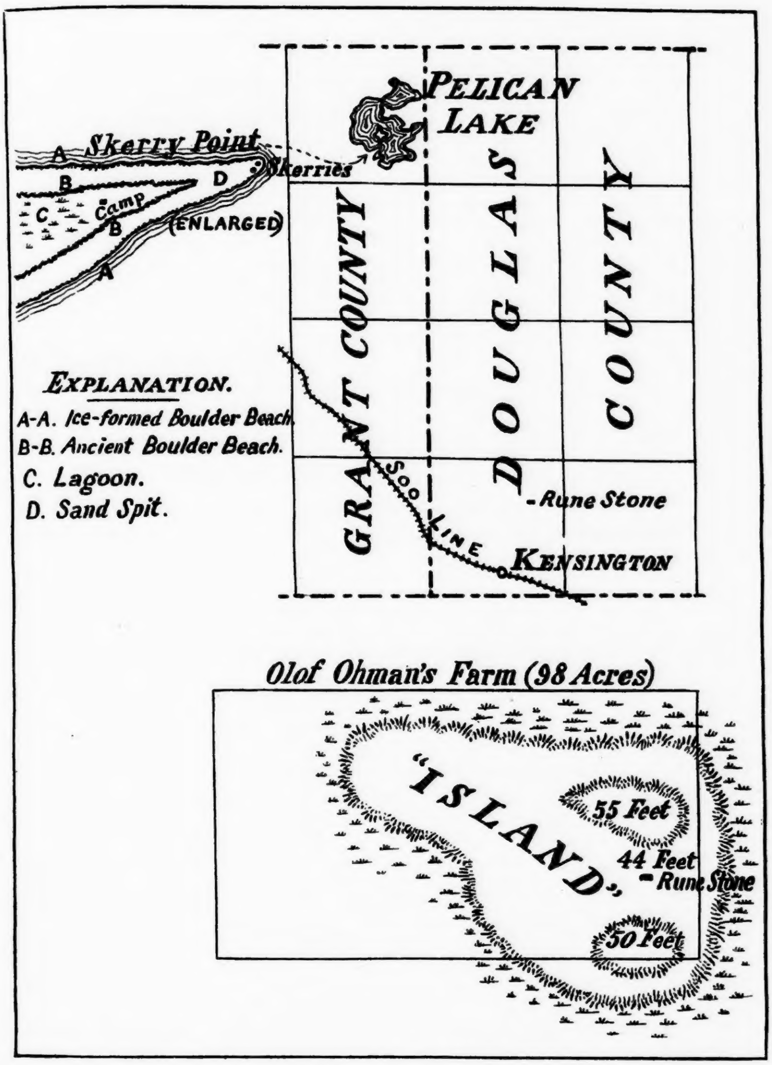
former found no rocks about the shores which could be accepted as the rocks mentioned in the inscription. Mr. Holand, guided by Rev. O. A. Norman of Ashby, found several large boulders standing in the water about 300 or 400 ft. from a sharp point on the southwest shore of Pelican lake, which seemed to him to answer the description. There are 12 or 13 of them and hence they are too numerous, and for the purpose of locating a camping-place they would hardly be referred to, and certainly would not be in accord with the number "two." Mr. Norman remarked, on occasion of a late interview, that the term "skerry" is applicable to one rock or a series of rocks, and that there are two lines or series of boulders which run not exactly parallel, and that those lines might be called the skerries referred to in the inscription; but such lines are not distinguishable from the land.

There are, however, on the point itself, at the water's edge and at the extremity of the point, two enormous boulders. One is of red porphyritic granite, cut by a coarser red dike, three inches wide, with dimensions of 6 ft. by 4 ft. by 3½ ft., with rounded contours. The other is of gray gneiss, banded with light reddish laminae, 6 ft. by 4½ ft. by 4 ft., irregularly and bluntly angular, showing some brecciation and a pegmatyte vein about an inch wide. These boulders are in the most exposed position, and are very conspicuous objects to anyone standing on the land a few rods farther back. Some small boulders and sand form the immediate breakwater of the beach, and also compose the point itself for some distance inland from the boulders.

This part of the point is liable to destruction by ice and by waves and winds of every season. That it is transitory is proved by the fact that the roots of a small oak are uncovered to the height of 14 in. above the present surface, and this oak must have started to grow when the surface on which it sprouted was so much higher than now. Under such conditions, at times when the adjoining beach may have been washed away, the large boulders would be surrounded by water. It is also very certain that 548 years ago the lake level was somewhat higher than it is now, and that circumstance alone. without the removal of the stones and sand lying now about the big boulders, would have brought these stones into the water, and would give them exactly the characters required to comply with the inscription. The present beach line is paralleled, on either side of the point, by a higher beach composed of boulders, gravel, and sand, which could have been formed only when the lake was about two feet higher than now. This upper beach fades away into the mainland of the point, but between its arms embraces a small lagoon. If the explorers' camp was on this point, near its extremity, the two big boulders would be chosen very naturally as reference points in the inscription.

(b) The stone is said to have been located on an island, but when found it was not on an island. It was on a morainic hill which is now surrounded by a grassy marsh, and which may have been an island in a small lake prior to the desiccation of the country which has converted many lakes into marshes and many marshes into meadows. This gradual drying up of the country is a well-known feature throughout the western part of the state. It has been known and many times noted during the last fifty years throughout the Northwest. If the stone be genuine, therefore, the present disagreement with the facts, as with the skerries, is due to physical change in the surface of the country.

(c) The stone was fourteen days' journey from the sea. At no place could the sea be reached in that space of time, with their means of travel, other than Hudson bay. There is some doubt whether this figure should be 14 or 41, and if it be 41 it would allow the supposition that the party penetrated the country by way of the Great Lakes. There are, however, insuperable objections to such an idea. It is a very improbable suggestion that from any place which may have had the name of Vinland a party would penetrate North America by that route, by sail and by foot, to encounter the natives in a tragic death only in western Minnesota. That suggestion need not be further considered; and the more so, since the route of possible travel, or at least most probable, as shown by the accompanying map of the regions north to Hudson bay and of the proximity of Minnesota through a well known water route, would have been from Vinland to Hudson bay, and to lake Winnipeg via Nelson river, and thence up the Red river of the North. This map is based on the chart of J. T. Smith, published in 1839 at London, in a work entitled *The Discovery of America by the Northmen in the Tenth*



MAP OF REGION WHERE KENSINGTON RUNE STONE WAS FOUND
From *Report to Minnesota Historical Society.*

Century. By this map it appears that the entrance tc Hudson bay is directly west from Westbygd and Eastbygd, the chief settlements of Greenland, and would hardly fail of being well known. It is the route which the ships of the Hudson Bay Company followed for about 300 years in reaching the region of furs tributary to Hudson bay.

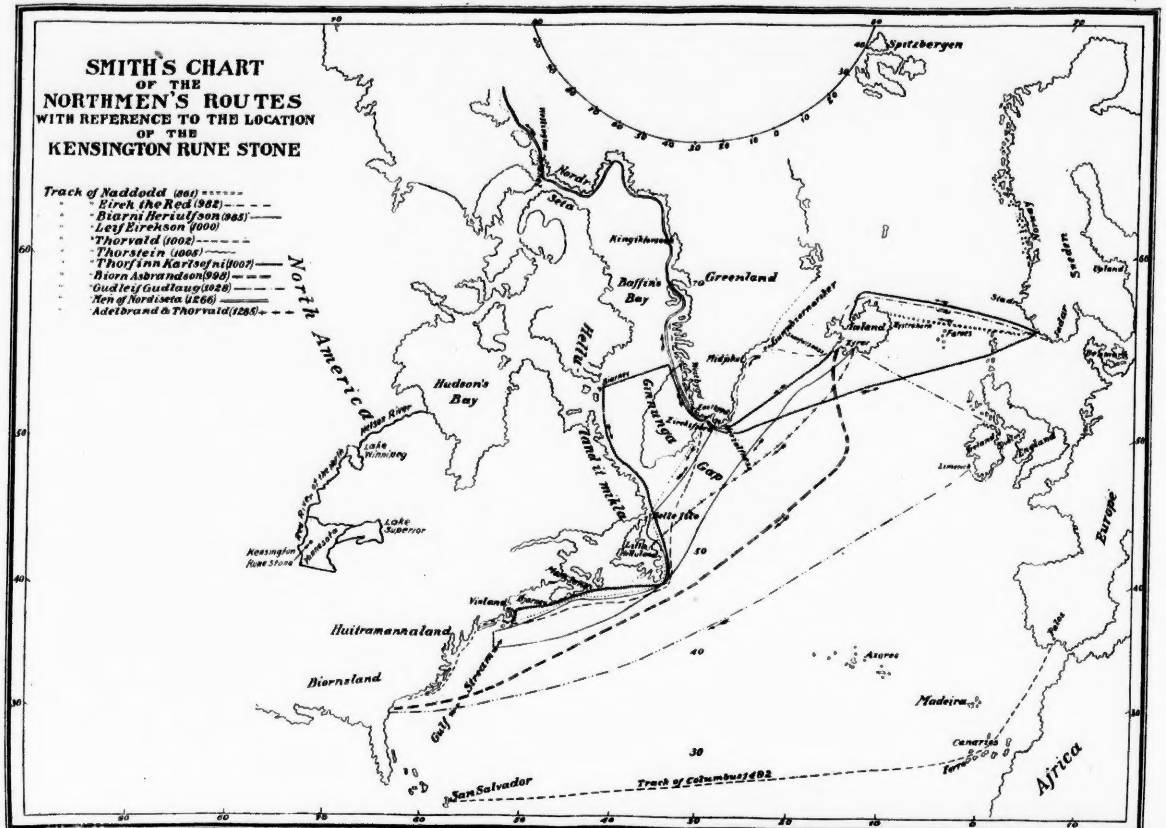
An interesting, although by no means new question, is raised in connection with this rune stone regarding the location of Vinland. The investigations of the Committee have thrown some new light on this. The three divisions of the Atlantic coast, Helluland, Markland, and Vinland,

have been variously placed along the coast, the most southern, Vinland being located at different points from Nova Scotia to Massachusetts and even further south. Mr. Joseph Fischer in quoting from Adam of Bremen's oldest work states that the objections to Adam's tales consist mainly in a statement like the following:

> After Wineland there is no habitable land in that ocean, but all that emerges is icebound and wrapped in impenetrable mist.

This description could not apply to the south of Labrador, "but it is applicable to the country north and west, *i.e.*, adjoining Hudson Strait and extending into Hudson Bay; and it seems to indicate that from the first the Northmen knew something of the ruggedness and inhospitable nature of at least the northern part of Hudson Bay. It is perhaps reasonable to presume that at the first the term Vinland was applied to the whole known coast of North America, and that it was only at a later epoch that it was localized and restricted to Nova Scotia or to Massachusetts." The objection to this has been the accounts of grapes growing spontaneously and other references to grain and vegetation. The researches of Prof. M. L. Fernald as recorded in his work on *Plants of Wineland the Good* seems to answer these objections. He says that:

> . . . the "grapes" referred to by the translators of the Sagas, were not the fruit of the grape vine (Vitis), but some form of current (Ribes), or the wine-berry of northern Europe (Vaccinium Vitis-Idaea), and that the last named species is common in northern Labrador. As the so-called "grapes" were gathered so abundantly as to fill their after-boat in the spring of the year, it seems certain that the fruit so gathered was that which is now well known as wine-berry (Vaccinium Vitis-Idaea), which is so abundant in the spring as to constitute the food supply for birds when they return from the south.
>
> Professor Fernald also shows that the "self-planted wheat," mentioned as one of the products of Vinland, was the strand wheat (Elymus arenarius), having a similar northern distribution. The tree which the Norsemen procured in Vinland, as identified by Fernald, was not maple, but some form of curly birch, probably the canoe birch (Betula papyracea). These researches not only confirm the description of Adam of Bremen, but render it probable that the people of Vinland were acquainted with more or less of Hudson bay.
>
> It is well known that students of Norse records have found difficulty in reconciling the statements respecting Vinland, not only as to the name of the discoverer, but as to the nature of the country and its products. It occurs to this Committee that possibly these discrepancies can be reconciled by the supposition that two different eastward-facing coasts have been confounded and considered as one. The earliest accounts are perfectly applicable to the west coast of Hudson bay. The Flatey book states that in Vinland were glaciers, and these are well known about the northwestern confines of Hudson bay, but are not found in Nova Scotia nor in Massachusetts, and only scantily in Labrador. The description by Adam of Bremen, and the earlier dates given by the Flatey book, giving Bjarne as the discoverer of Vinland, seem to point to the west coast of Hudson bay. After the lapse of about fifteen years (985 to 1000) Leif's accidental voyage to Vinland took place, and there is reason to suppose that he and his successors visited points on the Atlantic side of North America, but supposed they had visited the country which had already been named Vinland. From his and Karlsefne's sagas, there rose the geographic distinctions of Helluland, Markland, and Vinland, so much spoken of by all later accounts. The Committee has not taken the time necessary to verify or to disprove this hypothesis, and desires merely to call attention to it as a possible solution of contradictions that appear in the historic records, avoiding the necessity of rejecting either as untrustworthy.



From *Report to Minnesota Historical Society.*

The slight weathering of the inscription indicates that if it dates to 1362, it must have been buried, or at least that the stone was thrown to the ground face down, soon after it was cut. As there is not only a possibility but a probability that this occurred arguments *pro* or *con* based on the weathering are of little value. The weathering corresponds to that found on similar boulders found in the glacial deposits of this locality.

NOTES ON THE RECORD GIVEN BY THE INSCRIPTION

The party started from Vinland, a very remarkable statement in the light of the fact that it is not known, even at this day, that a permanent or even a temporary colony was established in Vinland. The expression "from Vinland" may mean in a direction westward from Vinland. In the light of the results cf Professor Fernald's studies on the *Plants of Wineland the Good*, it is remarkable, if the stone is fraudulent, that the location of that country by Fernald, since all modern (and even earlier) descriptions of Vinland have placed Vinland either in Nova Scotia or in Massachusetts. Could it have been a random and accidental coincidence, that a fraudulent record should correct the current historical belief of the times? How could an impostor come to the knowledge that Vinland was nowhere except in Labrador or at least in the region about the entrance to Hudson strait? What credit could be given to his record by going counter to the accepted history of his time? This agreement with the latest research as to the location of Vinland is a very suggestive fact.

They went "westward" from Vinland, and they had their ships till within 14 days' journey of the end of their exploration, when they left them "at the sea," with 10 men to guard them. If the record be fraudulent, what reason could there be for saying that their camp was 14 days' journey from the sea? How much more probable it would be to say that their camp was 40 days or even two months' journey from the sea, especially if Vinland was where it has been thought to be; and how much more probable that an impostor would not attempt to make a definite statement. If the record is fraudulent the impostor was very foolish not only in giving the distance of their camp from the sea, but also in saying how far it was north from the stone. Not only so, but he attempted, more foolishly, to give guides to the exact location of the camp by saying it was "near two skerries." If the stone had been noticeably more than one day's march from those skerries, or if the camp had been noticeably nearer or more distant than fourteen days' journey from "the sea," there would be much doubt thrown upon the record by such a discrepancy.

The exactness with which the location of the camp is described can be attributed to the probable burial of the ten men at the camp, and the natural desire to describe geographically the place of the bloody massacre of ten of their comrades; while the agreement of this exactness with the facts in nature shows how improbable it was for a faker runologist to have made the inscription. If the record be fraudulent, it is a remarkable fact that those two skerries exist, and at the right distance, and that there are no others.[3]

It is still more remarkable, on the hypothesis that the stone is fraudulent, that within modern times they could not be called skerries, as they are not now surrounded by water. Hence the impostor-scribe was not only a runologist, but he was able to look backward through the physical change that has come over the region, and to describe those boulders as they were 548 years ago, when there is no doubt that the water of the lake was so high as to surround them and thus warrant the description which he made of them. He must have been a geologist.

If the record is fraudulent, it is also remarkable that the impostor could see that 548 years ago the hill on which the stone was placed was surrounded by water so as to warrant the application of the term "island." He must have known, and must have

[3] Other lakes in the vicinity, within a possible range of twenty miles, have been searched over by Professor Fossum, Rev. O. A. Norman, and Mr. H. R. Holand, without finding anything that could be called "two skerries."

made allowance for the fact, that within recent time the country has dried up considerably, and that what are now marshes were then lakes.

If the stone be fraudulent, it is singular that the impostor ran the risk of all these details and violated none of them. A well considered fraud is usually characterized by the omission of details. Here was a recklessness and a fearlessness amongst details which betoken honesty and truth. The very discrepancies, where the details diverge from present geographic knowledge, when correctly understood are turned to so many points of confirmation.

"We were out fishing one day." That is a remarkable and rather singular statement, especially if the stone be fraudulent, since the fishing was on a lake twenty miles distant from the place at which the inscription was made. Again, they must have had boats. There is no reference to them. Where could they have got boats? Not a word is said as to how they reached the place where they were encamped, nor as to the direction to the sea. Such links as are necessary to make a connected and reasonable story would certainly be given by an impostor. But here the briefest statement is made of the leading facts, and the reader is left to connect them as best he can. We are not at a loss to supply the links. The boats must have been birch bark canoes, used to this day by the northern Indians, easy to propel in the water and easy to "portage" over the land.

Then comes the most remarkable feature of this remarkable inscription, "A.V.M." Hail, Virgin Mary! or Ave Maria. This is a distinctly Catholic expression. According to Archbishop Ireland, no modern Scandinavian would utter it, as they are Lutherans. It would be strictly appropriate in 1362. If the stone be fraudulent, the impostor artfully employed a term suitable to the date of the inscription; but we would hardly expect an impostor, such as this man must have been, to be so religious as to call on Mary, or any of the gods of the Vikings, or on any of the saints of Christianity. On the supposition that the stone is fraudulent, this is a decided anacronism and would hardly be introduced by an impostor.

If the stone is fraudulent, the base perpetrator was artful enough to make use of rune characters appropriate to the date 1362. The ancient runes are 16 in number, according to the grammar of Almquist. The inscription contains several characters not found in the old runic alphabet, and some that are peculiar to itself or to some locality.

Rev. O. A. Norman, of Ashby, called attention to a singular coincidence, viz., the frequency of the expression calling upon Mary, in Scandinavia, at the time of the "black death," which prevailed in the XIV century. A poem or song, entitled "Fornesbronen," was recited at the burials of the many dead, and appears to have become well known. It was lately reprinted in a brochure at Fergus Falls, Minn., entitled "Telesoga." Each verse ends with an appeal to Mary to grant help and freedom from evil. The sudden and bloody death of ten of their comrades seems to have impressed the living in a manner similar to the mysterious death of the black plague. If the stone be fraudulent, the impostor seems to have been aware of the prevalence of that prayer in the XIV century, and very shrewdly appended it at the proper place in this inscription.

It appears, from several considerations, that the scribe was a rather illiterate Swede. If the stone be fraudulent, it is singular that such a man should prove himself capable of such literary and historical knowledge, and of such artful cunning. If the stone be fraudulent, it seems necessary to suppose that a non-educated Swede should be able to make the inscription and to accomplish the following:

1. A simple, straightforward record.
2. Correct the prevalent notion as to the whereabouts of Vinland.
3. Refer to two skerries, which could not have existed when the record was made but did exist 548 years ago.
4. Refer to an island, which was not an island when the stone was inscribed, but was so 548 years ago.
5. Define exactly the location of the camp with reference to the seaside and with ference to the stone.

6. Describe the massacre in such a way as to indicate that the men were scalped by Indians, although no mention is made of Indians.

7. Make the prayer to the Virgin Mary common in Scandinavia in 1362, but an achronistic in the XIX century.

8. As an impostor, utter the common prayer of a devout Catholic of the XIV century.

9. Use in part some ancient runic characters instead of those common in later centuries.

10. All this deceit and laborious cunning, without any ascertainable motive, perpetrated in an unpopulated, or at most only a sparsely inhabited, region amongst a wilderness of forests.

LINGUISTIC CONCLUSIONS.

From the examination of the language of the stone the Committee think that they are warranted in making the following conclusions:

1. It cannot be the work of some unlettered amateur of the present day.

2. It is either the uncritical record of an exploration of the XIV century, or the fabrication of a consummate philologist familiar with the dialect of Vestgotland in the XIV century, which was essentially the Dalske dialect of Dalarne of the XVI century.

3. No expert philologist would make the blunder of writing *ded* for *död*. A modern philologist familiar with the evolution of *ö* from *au* would hardly make such an error, but such phonetic mistakes were common among the uncritical people of the XIV century.

4. The peculiarity of spelling "and" as both *ok* and *og* is abhorrent to the scientific precision of a modern philologist, but was very natural in the XIV century, when the sounds of *k*, *t*, and *p*, were frequently confounded with those of *g*, *d*, and *b*.

5. The use of the phrase, "*vi var ok fiske*," belongs in the same class of colloquialisms as *skullen* for *skulde han*, *haden* for *havde han*, etc. These phrases are all on the lips of the people in common speech, but no well informed person would suffer them to appear in a serious narrative in writing. But in the XIV century, with its greater phonetic freedom, they were all common.

6. Several obsolete words, which were in use in the XIV century, such as *laeger*, *rise*, *skjar*, *afilly*, and *from*, as well as the peculiar numeral characters, strongly indicate that no modern impostor made the inscription, as the works of scholars proving that they were in use at that time have mainly been published since the stone was found.

7. The linguistic internal evidences of the genuineness of the stone coincide with and confirm the indications that come from the finding of the stone and its attendant condition.

8. The numeral which expresses the number of days' journey distant from the seashore is more probably meant for *fourteen* than *forty-one*.

Finally the Committee adopted the following resolution:

RESOLVED, That this Committee renders a favorable opinion of the authenticity of the Kensington rune stone, provided, that the references to Scandinavian literature given in this Committee's report and accompanying papers be verified by a competent specialist in the Scandinavian languages, to be selected by this Committee, and that he approve the conclusions of this report.

Professor Gisle Bothne was selected to verify the references. In a letter to Professor Winchell he reports unfavorably in regard to the authenticity of the Kensington rune stone, although he admits the possibility of the Norwegians having penetrated to Minnesota in the XIV century. In conclusion, he says: "It seems to me that the stone should be brought to Norway to be examined by expert runeologists, and, in my opinion nothing else will dispose of the matter."

RECENT EXPOSURE OF PIT IN TRENTON GRAVEL A LITTLE FURTHER BACK THAN THE PLACE IN WHICH THE HUMAN FEMUR WAS FOUND. THE SANDSTONE BOULDER IN FOREGROUND CAME FROM 8 FT. BELOW THE SURFACE. A BISON BONE WAS FOUND 6 FT. UNDERNEATH IT

AMERICAN ANTHROPOLOGICAL ASSOCIATION

AMONG the many papers presented to this Association at its meeting in Providence, Rhode Island, December 28 and 29, 1910, there was a noteworthy one by Doctor Charles Peabody on *Certain Aspects of New Jersey Archæology*. This was of special interest from the fact that it indicates the close of the long contest concerning the question of the occurrence of human implements and remains in the undisturbed glacial gravels at Trenton, New Jersey, since it is connected with an announcement that Mr. Ernest Volk's report upon his long continued explorations of these gravels is shortly to be published. The most important discovery of this patient investigator was that of a human femur found 1st December, 1899, in undisturbed cross-bedded sand deposits beneath a stratum of unassorted glacial gravel 14 or 15 ft. below the surface. (See illustration RECORDS OF THE PAST, vol. VI, p. 163.) Though the main facts concerning this discovery were presented by Professor Putnam at the New York meeting of the Society of Americanists, October 20, 1902, the full details await publication in Mr. Volk's report. Doctor Peabody's paper, however, adds much interesting information concerning the situation of Mr. Volk's conclusive discovery. It appears that excavations have been carried on in this gravel bank almost continuously for the past 20 years, enabling us to compare the deposits throughout a considerable distance. In Wright's *Ice Age in North America*, fourth

edition, page 521 is a photograph showing the gravel bank as it appeared in 1889. In the photograph already referred to in RECORDS OF THE PAST we see the bank as it appeared 100 or 200 ft. further back in 1899. Doctor Peabody now shows the bank as it has been excavated a considerable distance farther back, from which it appears that the conditions were apparently constant during its deposition thus removing any lingering doubt that any persons may have had of its glacial age. In the exposure shown by Doctor Peabody, a boulder of red sandstone 2 or 3 ft. in diameter appears in the deposit 8 ft. below the surface, while 6 ft. below this, in cross-bedded gravel, the bone of a bison was found but a short time ago.

To understand how these human remains could be imbedded in these gravels in glacial times, one has but to examine photographs brought down some time ago by Professor I. C. Russell from the front of the Malaspina Glacier in Alaska (see Wright's *Ice Age in North America*, fifth edition, page 667) where it appears that toward the close of each summer when the melting of the ice is at its maximum, enormous floods which come out from the front of the glacier overflow the adjoining area and distribute such an immense amount of coarse sediment that it rapidly builds up a delta, sometimes gradually burying forests of standing trees. But while these torrential floods overflow the areas through which they pass in the latter part of the summer, they gradually diminish as cold weather approaches and for half the year leave a dry surface over which men and animals may roam and leave their marks behind them "on the sands of time" only to be covered by the debris brought down by succeeding floods. At Trenton the front of the ice was, indeed, 60 miles up the Delaware river, but the gorge of the Delaware until it reaches tide water is narrow and the gradient exceptionally steep (4 ft. per mile), so that no delta deposits were made till it reached tide water at Trenton where they spread out over an area 3 miles in diameter. The red sandstone boulder shown in Doctor Peabody's photograph came from the glaciated area of the upper Delaware valley and speaks in eloquent terms of the ice-laden floods which poured down the Delaware gorge and built up the delta terraces at Trenton during the closing stages of the Glacial Epoch, finding man already an occupant of the valley, associated with a striking cluster of animals now extinct in the region and whose remains are found associated with his,—namely, the mastodon, the walrus, Gieenland reindeer, the carabou, the bison, the moose and the musk ox.

ANNUAL MEETING OF THE SOCIETY OF BIBLICAL LITERATURE AND EXEGESIS

AT THE annual meeting of the Society of Biblical Literature and Exegesis held at the Union Theological Seminary in New York City, December 30 and 31, 1910, there were two papers presented which were of special archæological and historical interest. Prof. David G. Lyon, of Harvard Divinity School, reported upon the results of the third year's exploration in Samaria and gave an illustrated lecture upon the inscribed potsherds found in abundance near the close of their explorations. Fortunately, the ancient cityof Samaria is not encumbered like Jersualem with modern structures which interfere with excavation, but as the site has been long abandoned, there is a free field for the explorer. The city was built around and upon the truncated summit of an isolated conical hill. For 3 years the excavations of the Harvard expedition have been carried on at the summit of the hill, and are now suspended only from lack of funds. During the first two years the excavations were chiefly among the ruins of the Herodian and Roman epochs (briefly described in vol. VIII, pp. 175, 176, RECORDS OF THE PAST, with illustrations, vol. IX, pp. 133, 134). But near the end of the third year a large number of potsherds were found covered with inscriptions dating from the time of Ahab. These were mostly business documents similar to those found in Babylonia, but they revealed literary and artistic advancement among the Israelites which was unexpected. Indeed, many efforts have recently been made attempting to prove that the inscriptions on the Moabite stone and in the Siloam tunnel must have been of much later date than had been supposed, because of their artistic perfection; but in these postherds, the evidence is superabundant that writing was very common in thetime of Ahab and had attained to a high degree of perfection. The writing was in ink and the form of the letters closely approached that of later Hebrew. It is greatly to be desired that funds shall be provided for the continuance of this work, which, indeed, is but fairly begun, and as already remarked, is in a field where excavations are unfettered and where the promise of results is almost unrivaled.

Another paper of special importance was by Prof. G. Frederick Wright, upon the probable changes in the level of the Dead Sea. within the historic period. The paper was entitled *Geological Light on the Bodies of Water referred to under the title Lisân in Joshua xv: 2, 5.* In these passages in Joshua, the boundary of Judah is said to proceed from a 'tongue' (Lisân) at the south end of the Dead Sea and, coming around from Jerusalem, to end at a 'tongue' (Lisân) of the Dead Sea at Beth-Hoglah at the mouth of the Jordan. But there is now no tongue of the Dead Sea reaching up to Beth-Hoglah while the site of the ancient city is several miles north of the mouth of the Jordan. To meet this difficulty, Mr. Clermont-Ganneau had supposed that the level of the Dead Sea must have been considerably higher in the time of Joshua than now. On the contrary,

Doctor Wright maintained that it was probably 30 or 40 ft. lower at that time, and that the space between the Dead Sea and Beth-Hoglah had been largely filled in by a delta deposited by the Jordan river. In support of this theory, he maintains that the effect of the deposition of sediment at the mouth of the Jordan and of the various wadies which come into the Dead Sea from the eastern, southern and western sides of that body of water has been greatly to narrow the original area of the sea. This would limit the evaporating surface, so that the water would be compelled to rise and flow over the low ground at the south until the equilibrium between the precipitation and the evaporation was maintained.

We are familiar with the growth of similar deposits in other places. The city of Ephesus is now a considerable distance inland, because of the silting up of the mouth of the river. The city of Adria in Italy is now 15 miles inland, whereas it was a port on the Adriatic Sea in historic times. The city of Tientsin in China, now 30 miles inland, was a seaport during the Han dynasty. The sediment from the Tigris and Euphrates rivers has silted up the head of the Persian Gulf for a distance of nearly a hundred miles. Eridu, now a hundred miles inland, was a seaport in the time of the cuneiform inscriptions. Doctor Wright estimates that a cubic mile of sediment has been brought down by the Jordan into the head of the Dead Sea since the time of Abraham, and an equal amount from the other streams coming into the Sea farther south. This would be sufficient material to cover with sediment 25 square miles 500 ft. deep. The surveys about the mouth of the Jordan clearly indicate an extensive delta deposit of the Jordan south of Beth-Hoglah. In commenting upon Doctor Wright's paper, Professor Schmidt, of Cornell, who for a year was head of the Society's School at Jerusalem, confirmed the inferences of the paper that there must be deltas at the mouths of all the other considerable streams coming into the Dead Sea,—he having observed them at the mouth of the Zerka-Maon and of the Arnon coming in from the east, while Doctor Wright and other observers had noted similar deltas on the other sides. There can, therefore, be no doubt of the reality of this cause as limiting the original area of the Dead Sea when present climatic conditions first came into existence after the close of the Glacial period. Moreover, Professor Ellsworth Huntington, in his recent investigations of the field, believes that he has discovered a submerged shoreline 40 ft. below the present surface.

As the water in the south end of the lake is now nowhere more than 15 ft. deep and over a considerable portion only 5 or 6 ft. deep, it is in that area that the rising water would overflow and find compensation for the diminished area caused by the encroachments of the deposits at the north end. This area is fordable in low water. In 1818 Irby and Mangles saw a party of Arabs cross it from one side to the other along a route marked by branches of trees set up in the water. In RECORDS OF THE PAST, July-August, 1910, p. 229, note is made of the discovery by Mr. A. Forder of an ancient causeway connecting the east and west shores of the Dead Sea near the south end. The results of this conclusion concerning the former level of the Dead Sea are very far-reaching and important in their bearing on archæological and historical questions. They confirm the persistent tradi-

tion that Sodom and Gomorrah were at the south end of the Sea in the shallow area now covered by water. They make it entirely credible that this area was in the time of Abraham "like the garden of the Lord, like the land of Egypt, as thou goest unto Zoar," as the plain of Sodom and Gomorrah is described to have been (Genesis xiii, 10). These conclusions also make it almost certain that in the time of Chedorlaomer there was a passage from the south to the north end of the Sea along the margin without necessitating, as now, the difficult detour over the rugged mountains to the west. It is thus that the study of geology and physical geography is coming to our assistance in the interpretation of historical data and archæological remains.

ARCHAEOLOGICAL INSTITUTE OF AMERICA

THE annual meeting of the Archæological Institute of America, Prof. Francis W. Kelsey presiding, was held in Providence, Rhode Island, December 27 to 30. So many papers were presented that it would be impossible to give an account of even a small proportion of them. From this embarrassment of riches, we select for notice only two, namely, *Della Robbias in America*, by Alan Marquand, and *Italian Paintings in America*, by Frank J. Mather, Jr., both, it will be observed, by Princeton professors, and both calling attention to the wealth of material which we now have in this country for the study of Italian art during the period of the Renaissance. In fact the public and private collections in this country now contain so many of the best representatives of the art of that period that students make a mistake in going to Europe before giving attention to our own treasures, while those who are for any reason prevented from visiting the old world can supply the deficiency in good degree by giving attention to things within their reach at home.

The following is a partial list of the papers presented: *Report on the Excavation of Cyrene*, Arthur Fairbanks, Museum of Fine Arts, Boston; *The Excavation of Balcony House, Mesa Verde National Park*, Jesse L. Nusbaum, Santa Fé; *Methods of Classifying Roman Concrete Structures*, Esther Boise Van Deman, Research Associate of the Carnegie Institution, Rome; *A Marble Roman Bowl from Badgad*, Oliver S. Tonks, Princeton University; *The Erechtheum*, George W. Elderkin, Princeton University; *A Pair of Black-figured Lekythoi in the Worcester Museum*, Elizabeth M. Gardiner, Worcester Art Museum; *Survivals of Primitive Religion in Syria*, Lewis Bayles Paton, Hartford Theological Seminary; *The Sequence in the Development of Art in Copan and Quirigua*, Edgar L. Hewett, School of American, Archæology; *The Work of the School of American Archæology in 1910*, Alice C. Fletcher, Washington; *The Ruins of Choqquequirau*, Hiram Bingham, Yale University; *Philistine and Hebrew in Palestine*, Elihu Grant, Smith College; *Recent Explorations in Northern Guatemala*, A. M. Tozzer,

Harvard University; *The Historical Value of the Books of Chilan Balam*, Sylvanus G. Morley, Santa Fé; *Cretan Anthropometry*, Charles H. Hawes; *An Archaic Greek Grave Stele in the Museum of Fine Arts, Boston*, Lacey D. Caskey, Boston; *The Work of Domitian on the Palatine Hill in Rome*, Esther Boise Van Deman; *Some Incantation Bowls from Nippur*, James A. Montgomery, University of Pennsylvania; *The Chair of Maximianus in Ravenna*, Thomas J. Preston, Jr., Princeton University; *Coptic Architectural Fragments recently acquired by the Metropolitan Museum*, Caroline L. Ransom, Metropolitan Museum; *The Bird Motive in Ancient Pajaritan Pottery*, Kenneth M. Chapman, Santa Fé; *Two Copies of the Head of Athena Parthenos from Corinth*, David M. Robinson, Johns Hopkins University; *Notes on the Recent Egyptian Acquisitions from Gizeh in the Boston Museum of Fine Arts*, L. Earle Rowe, Boston; *American Excavations in Crete in 1910*, Edith H. Hall, Mt. Holyoke College; *Parthenon Studies*, B. H. Hill. Athens, Greece.

BOOK REVIEWS

EXPLORATIONS IN THE DEPARTMENT OF PETEN, GUATEMALA[1]

IN Volume IV, No. 3 of the Memoirs of the Peabody Museum Mr. Teobert Maler gives an account of several expeditions which he has made through northern Guatemala and his observations on the sites of ancient cities scattered through this region. On Peten-Itza, near the town of Motul, which Mr. Maler distinguishes from the well-known city of that name in Yucatan by adding the suffix de San José, an important temple site was discovered, which he describes as follows:

> In a square near the center of the city I found a large monolith, which, however, was broken into two pieces. The lower piece was still standing upright in the ground. One of its broad faces displayed sculpture of rude appearance in consequence of being much weatherworn. The sculpture on the upper piece, which had fallen off, was completely destroyed by fires and torrents of rain, and therefore there was nothing to be done with this once interesting stela.
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> The main group of *cuyos* lies in the western part of the city. On the esplanade of one of these fallen temples I found what was once a large stela covered on all 4 sides with sculptures. The sculpture on the eastern broad face only could be photographed, and that under difficulties.
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> The now ruined temple to which this large stela belonged stood on the platform of a massive substructure some 5 m. high, with a stairway on the west side since its façade may have faced the west. On the esplanade of this temple, on a small platform only half a meter high stands the stela, which should be considered as connected with the temple. Unfortunately this stela was scaled away at the top and on the side faces

[1] Memoirs of the Peabody Museum of American Archæology and Ethnology, Harvard University, Vol. IV, No. 3, *Explorations in the Department of Peten, Guatemala and Adjacent Region, Motul de San José; Peten-Itza, Reports of Explorations for the Museum*, by Teobert Maler. Published by the Museum, Cambridge, 1910.

EAST SIDE OF STELA, MOTULDE SAN JOSÉ

From *Memoirs of Peabody Museum.*

by falling trees and the disastrous milpa fires, and it was also badly calcined, but the sculptured face turned toward the temple was still preserved to some extent. . . . The sculpture was buried from the knees of the dancing priest downward. This lowest part was dug out and the base line is now plainly seen. The present outer height of the stone is 236 cm., to which should be added the part sunk in the ground and that broken off at the top. Its breadth now is the same as its height, but some pieces have been broken off on each side face. The stone is 46 cm. thick.

Stela. East Side. Two priests of high rank, supposed to be standing opposite one another, are evidently engaged in a sacred dance. Let us describe first the figure of the high priest on the observer's left. He is represented in front view and touches the ground only with his tiptoes while his face is turned to the left. The style of his foot-gear is plainly seen in the photograph and each instep has a pear-shaped ornament with a tuft. He wears close-fitting breeches. His girdle with a lower border of shells is almost wholly hidden, but we recognize the broad ornamental flap hanging from his belt, ending in rectangular scrolls turning to the right and left. He wears cuffs, a large, richly decorated breast-cape, and a feather cloak on his back. The round ear ornament is still plainly visible on his somewhat weather-worn face. His head-dress, built up high, shows three masks of gods placed one above the other. One large eye and proboscis-like nose are still visible on the mask. Above the third eye is a circular design (small *rueda*, Tonalamatl?). Superabundant masses of feathers rise upward, droop backward and particularly forward. With his right hand the priest holds to his body the delicately executed little figure of a god with a snouted face as usual (*i.e.*, Ehecatl, god of winds) and the small leg by which the idol is held ends in a little snake stretching forward. The small god wears a loincloth or *maxtli* (*mastli*). With his tiny right hand he is closing the mouth of the face-mask attached to the middle of the priest's breast-cape. The priest extends his left arm, on the wrist of which is a small round shield, to the other person of rank.

The second personage (on the observer's right) is also represented in front view, but with his face turned to the right. He, too, touches the ground only with his tiptoes and wears the same style of shoe and similar breeches. His gala girdle trimmed on its lower edge with a fringe of shells is plainly seen and shows in front three face masks each with a single pendant. The garment with breast-cape consists chiefly of beads. A narrow breast-plate can be discerned lying horizontally below a larger breast ornament decorated with small incised circles. On his back is a cloak of radiating feathers. A round ear-peg is visible. The tall helmet is mostly destroyed, but its superabundant bunches of feathers are plainly seen extending upward, forward and backward. The priest extends his right hand to his companion, and his left hand, with a kind of beaded band on the wrist, holds the familiar ornamental pouch decorated with small incised circles.

Between the two priests stands a kind of altar, the base of which displays a horizontal row of 6 small glyphs, while its somewhat projecting front surface shows two vertical rows each containing 5 large glyphs. Unfortunately only 4 of these glyphs are partially preserved, while the others were scaled off by fire. In addition there are 4 finely carved glyphs in a vertical row on the background by the side of each priest.

In Lake Peten-Itza Mr. Maler discribes a sacred island which rises some 30 ft. above the surface of the lake. In the center of the island there is an elevation with a leveled surface of considerable extent formerly occupied by buildings, the walls of two temples being easily distinguished. "The façades of both temlpes faced the west and their backs were therefore turned to the plaza." The façade facing west shows 4 massive pillars, "the spaces between them forming the entrance to the temple proper." The outer wall had a frieze which still shows the stucco and the color used. "The steeply sloping frieze has a torus as an upper and a lower cornice and both tori are of a fiery red color, while the inclined surface of the frieze is of a yellowish white tint." There is a band of glyphs in color, but not sufficiently preserved for copying.

Beside these more detailed discoveries there are recorded a large number of sites which were observed but not examined carefully. Possibly the chief value of this Memoir will be as a guide for future excavation in this most interesting region.

EGYPT AND ISRAEL[2]

IN THIS volume Doctor Petrie gives in concise and attractive form the entire story of Egypt's relations both to Judaism and to Christianity. The volume is enriched also by more than 50 illustrations, many of them full page.

Altogether it is a wonderful commentary on the fulfillment of the prophecy "out of Egypt have I called my son." Some of the positions maintained by Doctor Petrie differ widely from the traditional views, but they are presented with such reverence and skillful array of facts and arguments that the reader cannot but be impressed with their plausibility at least. He places the crossing of the Red Sea north of the Bitter Lakes, whereas most authorities (see RECORDS OF THE PAST, vol. V, pp. 295–302) would place it south for reasons which seem to us satisfactory. The date of the Exodus is fixed at 1220 B.C. The most striking chapter in the book relates to the numbers of the Israelites, a subject which has created great difficulties with all interpreters; since Goshen seemed too small to have contained the two or three million people which the ordinary interpretation assigns to the Israelites at this time, and the maintenance of such a population during the 40 years in the wilderness seems entirely beyond the capacity of the country passed through. At the same time the description in the text seems to imply very much smaller numbers. For one thing, the number of the midwives required, only two, is out of all proportion to the great numbers of the people, as is also the extent to which Moses is said to have judged disputes among the people. Moreover, upon the entrance into Palestine, fear was expressed least the people were so few that they would be driven out by the wild beasts.

To obviate these difficulties, Mr. Harold M. Wiener in his *Essays in Pentateuchal Critisicm* has emphasized the fact that by the early Hebrew method of transmitting numbers it was very easy to confound tens with hundreds which in some cases we know has been done. He, therefore, concludes that in the course of transmission, after the country had become fully occupied by a dense population, the text in this respect was so corrupted that the census of the population in most cases should be divided by ten. Doctor Petrie has a different explanation arising from the identity of the word for thousand and family. This is *alaf*. "Hence the statement in words of 32 *alaf* 2 hundred people might mean 32 thousand 2 hundred, or 32 families 2 hundred people. In the latter sense the column of thousands would be the numbers of tents in a tribe, and the column of hundreds the numbers of people." (P. 43.)

Upon carrying out the calculations upon this theory, he finds many remarkable confirmations of it in the construction of the tables and thereby reduces the numbers of those engaged in the Exodus to a total of 5550 persons. The author's chapter on this subject is certainly worthy of attention. Aside from these questionable interpretations there is little else to which

[2] *Egypt and Israel.* By Professor W. M. Flinders Petrie, D.C.L., LL.D., F.B.A. Fully illustrated; pp. 150. Society for Promotion of Christian Knowledge, London: E. S. Gorham, New York. 1911.

conservative critics could in any manner object, but the volume is full of illustrative material shedding light upon the whole connection of Egypt with Israel and with the early Christian Church and will be welcomed by all historians and archæologists as well as students of biblical literature.

THE LURE OF THE ANTIQUE[3]

ANY one who remembers his or her grandmother's china closet and has been so fortunate as to have been privileged to rummage in the old family attic, with its fascinating chests, silent spinning wheels, and piles of unused furniture, will be sure to enjoy *The Lure of the Antique* by Walter A. Dyer. Its illustrations, quaint cover and good type will give much pleasure as well as instruction.

The book is full of useful hints to the amateur collector; and one must find it hard to go astray in his search for Chippendale or Hipplewhite or Lowestoft, if due attention is given to these suggestions. The author also gives some very good advice to those impulsive but inconsiderate people who jumble all styles and periods of antiques together making a hodgepodge of their houses. He very sensibly advises them to take some one line and adhere as closely as possible to that and they will be apt to find the result most pleasing. Beauty is more largely the result of harmony than people usually consider—any number of really elegant pieces in themselves fail to do what they should when jostled by some incongruity. He devotes a chapter to various pieces of furniture, paying more attention to chairs we believe than to almost anything else. Beginning with the year 1600 and the Elizabethan chair, he mentions only a few points. The earlier chairs were heavily braced near the floor but gradually this bracing grew lighter until it finally disappeared—thus giving the collector an idea as to its age. Again he details quite fully the peculiarities of the different styles and makes the assertion that it was not till 1750 that mahogany chairs became common. From 1760–1820 England produced her best furniture, many pieces of which have found their way to this country. Chippendale, Hipplewhite, and Sheraton were the leaders in design, and much beautiful work was turned out from their designs. A most interesting chapter is devoted to desks and tables. The gate-leg table of 1680, the pie-crust table of a hundred years later, the card tables of our great grand-mothers, the pier tables of Hipplewhite and Sheraton with their beautifully inlaid tops—all have a place.

We learn that it was not to any of the famous designers that we owe the sideboard but to a Thomas Shearer of London. Hipplewhite later utilized his designs and changed them somewhat. However our author considers Sheraton's sideboards as quite the most superb pieces of cabinet making. Cellarets, closets for wine bottles, slides for serving trays and

[3] *The Lure of the Antique*. By Walter Dyer. Pp. xii, 499; 79 illustrations. $2.40. The Century Co., New York. 1910.

racks for glasses and plates,—in addition we frequently find urn shaped knife boxes, and these usually inlaid.

One despairs of giving much idea of the information in the chapters on four-posters and other bedsteads, there is so much of interest to say. The Tent beds are about as rare as any. The beautiful carving on the old four-posters, and the grace and proportions of these posts make them a most fascinating study either in the book or when one is the happy owner of one. Most of these bedsteads in this country date no farther back than 1800, and belong to the Empire period. One test as to age is worth remembering—as a rule the larger the posts the later the age.

Quite an interesting chapter is given to clocks, in which somewhat of their early history and use is sketched. It was not until 1685 that the tall clock as we know it came into use. Looking glasses have a fair share of our author's attention; and lovely examples of the different styles are given. Lamps and candlesticks and candelabra with their pendants of prisms—all are spoken of, and enough said to make it quite possible for an owner to reach an approximate idea of their age.

We feel that the author is most in love with his subject when he approaches the pottery. He well may grow eloquent over the beauties of Wedgewood and the interest of Old Blue Staffordshire Lusterware—Lowestoft. He does wax eloquent over each, for each one has its own merits. Then for the lover of glassware is to be found a most fascinating chapter. Those collecting Pewter, which has recently come to be such a craze, will find dates and details. Twenty-seven pages are given to old silver ware and one cannot choose what to quote, all is so interesting. We shall say in a few words what he really means—study your old silver, every mark on it means something if you can only get the clue.

Finally a most timely chapter is added on faking. The public is so anxious for antiques that there are always people ready to deceive and profit by the deception. In a postscript the author adds that in a recent bulletin of the Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C., much valuable information may be gathered on the subject of manufactured antiques.

FLORENCE B. WRIGHT.

PICTURES OF THE APOSTOLIC CHURCH[4]

SIR WILLIAM RAMSAY'S long continued investigations in Asia Minor makes everything he writes upon the Pauline Epistles of great historic and archæological interest. This volume will, therefore, be widely serviceable not only to the students of the New Testament for whom it is especially prepared but to all who desire to become acquainted with the conditions of western Asia Minor during the first century of the Christian era.

[4] *Pictures of the Apostolic Church, its Life and Thought.* By Sir William Ramsay, D.D., D.C.L., LLD., Litt.D. Pp. xii, 420. $1.50 net. The Sunday School Times Co.: Philadelphia. 1910.

A HISTORY OF NEW TESTAMENT TIMES IN PALESTINE[5]

NO HISTORY of New Testament times in Palestine could be written without devoting much space to the Maccabaean era which preceded the birth of Christ, and indeed to the whole course of things after the conquest of Alexander. More than half of this volume, consequently, is devoted to that period. So great is the complication of social, religious and political affairs during all this time that wide knowledge of historical documents and broad sympathies with diverse classes of people are required for its proper treatment; all this is possessed by the author so that he has succeeded in treating the subject in a manner which is worthy of unqualified commendation. The volume ends with the wholesale suicide of the garrison at Masada, A.D. 71 (see RECORDS OF THE PAST, vol. V, pp. 368–372).

EDITORIAL NOTES

LECTURE BY DOCTOR MACCURDY.—On 3d of December, 1910, Doctor George Grant MacCurdy of Yale University, lectured at the University of Pennsylvania, his subject being the *Antiquity of Man in Europe*. This was the first of a series of lectures on the *History of Mankind* to be given by various speakers.

OFFICERS OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION FOR 1911.—At the recent meeting of the American Anthropological Association held in Providence, R. I., officers for the ensuing year were elected as follows:—President, Doctor J. Walter Fewkes, Washington, D. C.; Secretary, Doctor George Grant MacCurdy, New Haven, Conn.; Treasurer, Mr. B. T. B. Hyde, New York City; and Editor, Doctor John R. Swanton, Washington, D. C.

CINERARY URN FROM KILBURN MOOR.—Yorkshire papers report that in September, 1910, Mr. John Sanders investigated an ancient burial-ground on Kilburn Moor. While exploring a barrow, he unearthed a cinerary urn 14 in. high, 16 in. in diameter at the top and 4 in. across the bottom. It is ornamented with the furrow and chevron patterns, put on by means of the twisted thong and finger tips. It is of elegant form, much like one obtained from a neighboring barrow. In it were cremated human remains, the bones of small animals split open in ordei to get the marrow, and 5 bronze fragments.

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[5] *A History of New Testament Times in Palestine, 175 B.C.–70A.D.* By Shailer Mathews, Professor of New Testament History and Interpretation in the University of Chicago. Map; pp. xi, 218. $1.00 net. Macmillan Co.: New York. 1908.

UNIVERSAL RACES CONGRESS.—"The first Universal Races Congress, which will meet in London in June, 1911, will be of considerable interest to anthropologists. It is expected that most of the leading races in the world will be represented. The papers to be discussed at the Congress will be published before the meeting in a separate volume.

"All information about the Congress may be obtained from the secretary, G. Spiller, 63, South Hill Park, Hampstead."—[*Man*, London.]

MAUMBURY RINGS.—The excavations at "Maumbury Rings" near Dorchester for the season of 1910 disclosed among other things, 4 skeletons. Two were lying about 3 in. below the turf line of the northwest terrace of the earthwork and two more to the north close to the entrance of the amphitheater. One skeleton was in a crouching position in a shallow cavity, and another lying on its back with the legs drawn up. Among the smaller finds was part of the base of an inscribed bowl of Samian ware, bearing characters of silver.

ALABAMA ANTHROPOLOGICAL SOCIETY.—We are pleased to note from time to time the spread of interest in archæological and anthropological studies as indicated by the formation of local societies. There has recently come into our hands the *Handbook of the Alabama Anthropological Society*. This society was formed in the spring of 1909, with the object of promoting anthropological study and research. The *Handbook* contains the constitution of the Society, an account of its organization and a list of members together with a preliminary list of collectors and collections of Alabama material and a catalog and bibliography of Alabama mounds and prehistoric works. These lists do not pretend to be exhaustive, but are intended as a basis for further work and as an aid in future explorations.

ANTIQUITIES FROM THE NILGIRI HILLS.—In the fall of 1910 a number of antiquities from sepulchral mounds in the Nilgiri Hills, Southern India, were exhibited in the British Museum. The collection, consisting of bronze bowls with and without stands, a bronze mirror of early Greek type and a number of earthenware pots, was discovered in stone circles from 6 to 14 ft. in diameter which had been surrounded by walls from 4 to 5 ft. high. "The pottery is rather of rude workmanship having rounded bottoms and lids surmounted by figures of men and animals. With the bronze vessels were found a quantity of beads of various materials, but principally of glass, agate, or carnelians; along with these were also discovered some spearheads and other small objects but they do not appear to belong to the same period. The age of these remains is uncertain; neither is it known to what people they may have belonged."

ANIMAL FIGURES IN THE MAYA CODICES.—Volume IV, no. 3, of *Papers of the Peabody Museum of American Archæology and Ethnology*, Harvard University, consists of a discussion of the *Animal Figures in the Maya Codices* by Alfred M. Tozzer, Ph.D., and Glover M. Allen, Ph.D.

The authors undertake to interpret the conventionalized animal figures which occur frequently in Maya codices. Doctor Allen is a zoōlogist familiar with the animals of Mexico and Central America and therefore well fitted to assist in identifying the figures. Stone carvings, stucco figures and frescoes have been studied as well as manuscripts in the endeavor to determine the use and significance of the species represented. Only a small portion of the animal life of the country inhabited by the Mayas is represented. In some cases there is little doubt as to the identification. In other cases the work is more difficult, but in only a few is there any great doubt as to the species. The paper is provided with numerous illustrations of the various drawings of different species identified.

SKELETON FROM GRAVEL PIT IN WORCESTERSHIRE.—Not long ago, at Overbury, a village on the south side of Bredon Hill, Worcestershire, a skeleton was found in a quarry of oölite brash. It was lying 5 ft. below the surface. Evidently it had been built around with rough stones, as there weie remains of an arch over the head on one side and over the feet on the other. The floor was roughly paved with flat stones. The enclosure was $3\frac{3}{4}$ ft. long and $1\frac{1}{2}$ ft. high. The body was reclining with spine slightly bent forward, facing the west. According to Professoi MacAlister of Cambridge, the skull is probably late British. Most of the small bones soon fell to pieces, but the long bones were removed fairly whole. On the sole of each foot were about 35 iron nails. The material into which they were fixed was very much decayed. A number of iron nails were found on the floor around the skeleton. The arrangement of these seems to indicate that there was some form of wooden casing inside of the stonework, but there was no trace of decayed wood under the skeleton at the time of discovery. Bits of charcoal were, scattered in the soil.

PREHISTORIC BURIALS IN EGYPT.—At the annual meeting of the Egypt Exploration Fund, held in November, 1910, Doctor Naville gave a lecture dealing mainly with the so-called prehistoric burials in Egypt. His chief point was that the people who buried their dead in a "crouched" (perhaps really a sitting) posture must have existed at the same time as a race whose dead were interred at full length, lying on their backs. Without doubt these latter were dynastic Egyptians. Up to the present it has been considered that the crouched burials were a sign of a "prehistoric" people who died out before the advent of the dynastic Egyptians. Doctor Naville's experience shows that on early sites the crouched burials outnumber the extended ones. In a cemetery last year he found graves containing crouched bodies close to those containing extended ones in such manner that the crouched burials were evidently later. Doctor Naville would, therefore, conclude that the race which invaded Egypt not long before the beginning of the I dynasty did not supplant, but lived side by side with the people whom they found. The conqueied people were allowed to retain their own burial customs. The conqueiors probably excelled only in the use oi metal. Doctor Naville considers both races to have been of Afiican origin.

THE FORUM OF CORSTOPITUM.—At the Meeting of the Society of Antiquaries (London) on 24 November, 1910, a paper was read on *The Forum of Corstopitum*. The forum is nearly square. There is a large central court with ranges of buildings on each side, the entrance having been in the center of the south range. The west range was divided into 9 small courts, opening into the central court. The south range was divided into 10 courts, which seem to have opened on the street, not on the central court. The east range appears to have been a single chamber running the length of the court. Not enough of the north range remains to determine the plan.

The walls in some places remain 2 or 3 courses above the foundations. In one portion the walls have been overturned. No stone of a course higher than the plinth course was found in this portion, suggesting that the building as originally designed was abandoned in an unfinished condition. The site was undoubtedly occupied after the abandonment and continued to be occupied to the end of the Roman period. Some of the south courts show traces of two later floors. The date of beginning and abandoning the building must have been very near together. Coins found belong to some part of the Antonine period.

ORIGIN OF THE PHŒNICIAN ALPHABET.—At the meeting of the Society of Biblical Archæology (London) on November 9, 1910, Professor Sayce read a paper on the origin of the Phœnician alphabet. He pointed out that there was no evidence of the use of an alphabet in Palestine before the Davidic era when it was probably introduced. The Greek forms, he believes, show that the names of the letters go back to a very early period and were derived from the pictographs out of which the letters were evolved. To restore the primitive pictorial forms, the letters must be tilted to one side, like the cuneiform characters. The original pictographs were written vertically. Professor Sayce draws the following conclusions from an analysis of the names: "(1) The names were given to the characters before they became letters; (2) the Semitic dialect to which they belong was related to both Canaanite and Assyrian; (3) the users of pictographs were semi-nomads; (4) some of the pictographs indicate acquaintance with the Hittite hieroglyphs; (5) they were, however, an independent invention; (6) some of the characters came to be drawn defectively with broken lines, between the time when the names were given to them and their development into letters; (7) the *samech* originally came after *shin;* (8) the pictographs were grouped in pairs beginning with *aleph*, 'the ox' or 'leader' (*alûph*) and ending with the cross, which denoted the end of a sentence in the Cretan hieroglyphs."

PREHISTORIC SANTA FÉ.—In June 1910, while excavations were being made for a house on LaGarita hill, Santa Fé, a skeleton was found. It is that of a women, probably under 20 years of age. The cranium and some of the long bones were recovered. The skull is flattened at the back on the right side, an artificial deformation characteristic of all the

ancient tribes of the Rio Grande valley. In speaking of the skull, Doctor Edgar L. Hewett said:

It is a typical dolichocephalic skull—the long narrow type. This is of especial interest because of the fact that the Pueblo Indians of the present day are predominently brachycephalic—short, broadheaded, there being from 15 to 25 per cent of the other type among them. It was upon this characteristic that we were able to determine that the ancient cliff dwellers and mesa dwellers of the Pajarito plateau west of the Rio Grande were not identical with the Pueblo Indians, the former having been a perfectly pure stock, 100 per cent dolichocephalic, while the Pueblos are a mixed stock but predominantly brachycephalic. The skeleton found under Mr. Morley's house conforms exactly in type with others that have been found in making excavations about the Old Palace. This fact would seem to relate the inhabitants of prehistoric Santa Fé to the ancient Pajaritans, (the name we have given to the prehistoric culture west of the Rio Grande), more closely than to the modern Pueblos.

This find led Doctor Hewett to make some remarks as to prehistoric Santa Fé and its inhabitants. The modern Pueblos, he states, are composed of a strain of the old Pajaritan stock and a stronger strain from outside. The older culture prevailed because it was suited to the climate, but the physical character of the newcomers predominated.

The ancient name for the site where Santa Fé now stands was "Kuapoge" —the place of the shell-beads near the water. There were 3 pueblos there— a large terraced one on Fort Marcy hill, another on the site of San Miguel church and another in the valley, north of the river. Portions of the walls of the second pueblo still exist in the foundations of the so-called "Oldest House in Santa Fé," built in the XVII century. There is an ancient burying ground under part of the Old Palace. As the building was being altered for museum purposes, there were disclosed portions of an ancient puddled wall, identical with fragments of puddled walls formerly to be seen in the foundations of the Oldest House and under the fortifications of Fort Marcy. To quote Doctor Hewett further:

None of these towns were occupied at the time when the Santa Fé valley was first seen by white men. All were in ruins but the evidences at hand justifiy the belief that if one could have stood upon the spot where the city now stands, looking east from the site of the Church of Our Lady of Guadalupe, 500 years ago, there would have been seen on what we call Fort Marcy hill, an Indian town of considerable size, consisting of one large terraced pueblo and one or more smaller buildings near by, a kiva or sanctuary of the circular subterranean type on the bench half way down the hill side; south of the river on San Miguel slope, a small pueblo two stories high, and passing back and forth from these two towns to the river, then considerably larger than now, the water carriers with their ollas on their heads. In the foreground, where the historic Old Palace has undergone the vicissitudes of nearly 3 centuries, would have been seen a cluster of ruined walls and rounded mounds, the remains of an earlier town, over which some of the earliest houses of Santa Fé were doubtless built.

Director Hewett urges all in Santa Fé who come across archæological remains in the course of building and ditching to inform the museum authorities at once, so that all possible material for the study of the ancient cultures may be properly preserved.